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A manual for medical officers of the militia of the United States

Edward Jacob Forster

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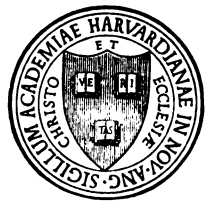

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A MANUAL

FOR

MEDICAL OFFICERS OF THE MILITIA OF THE UNITED STATES.

BY

EDWARD JACOB FORSTER, M. D.,

SURGEON FIFTH REGIMENT OF INFANTRY; MEMBER OF BOARD OF MEDICAL EXAMINERS MASSACHUSETTS VOLUNTEER MILITIA.

NEW YORK:
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To

BRIGADIER-GENERAL

WILLIAM JOHNSON DALE, M. D.,

SURGEON-GENERAL OF MASSACHUSETTS,

This Volume

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Commonwealth of Massachusetts.

ADJUTANT-GENERAL'S OFFICE,
BOSTON, *December* 22, 1876.

SPECIAL ORDERS, No. 171.

AT the request of the Surgeon-General, a Board will assemble at such time and place as the senior member thereof may direct, to take into consideration the "Manual for Medical Officers of the Militia of the United States," prepared by Major Edward J. Forster, Surgeon Fifth Regiment, and will report its opinion whether the said Manual should be adopted for the use of the Medical Officers of the Massachusetts Volunteer Militia. The Board will be composed of Colonel Edward G. Stevens, Assistant Inspector-General; Lieutenant-Colonel Robert Amory, Medical Director Second Brigade; Major William L. Richardson, Surgeon First Corps of Cadets. The Board will serve without compensation.

By order of the Commander-in-Chief.

J. A. CUNNINGHAM,
Adjutant-General.

To MAJOR-GENERAL JAMES A. CUNNINGHAM, *Adjutant-General, M. V. M., State House, Boston.*

General: — The Board of Officers appointed under the foregoing has the honor to submit the following report: —

After a careful examination and review of the "Manual for Medical Officers of the Militia of the United States," presented by Edward Jacob Forster, M. D., Surgeon of the Fifth Regiment, M. V. M., the Board is of the opinion that the work will be for all militia officers, especially those of the medical department, a convenient and useful manual, and respectfully recommend its adoption by the Commonwealth of Massachusetts for the use of the medical officers of the Massachusetts Volunteer Militia.

EDWARD G. STEVENS,
Colonel, and Assistant Inspector-General, M. V. M.

ROBERT AMORY,
Lieut.-Col., and Med. Director 2d Brigade, M. V. M.

WILLIAM L. RICHARDSON,
Major, and Surgeon 1st Corps Cadets, M. V. M.

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Commonwealth of Massachusetts.

ADJUTANT-GENERAL'S OFFICE,
BOSTON, *July* 2, 1877.

GENERAL ORDERS, No. 9.

In accordance with the recommendations of the Board of Officers appointed by Special Orders No. 171, series of 1876, from this office, the "Manual for Medical Officers of the Militia of the United States," prepared by Surgeon Edward J. Forster, Fifth Regiment Infantry M. V. M., is hereby adopted for use of the Medical Officers of the Militia of this Commonwealth.

By order of the Commander-in-Chief.

JAMES A. CUNNINGHAM,
Adjutant-General.

Official.

ISAAC F. KINGSBURY,
Assistant Adjutant-General.

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PREFACE.

My aim in preparing this little volume has been to give to the militia surgeon an outline of his various duties, and the details for their proper performance, as given in tactics laid down in army regulations or established by customs of the service.

Such a book could not have been prepared without constant reference to regulations and tactics, from both of which I have freely quoted, and to such works as Kautz's "Customs of Service," Greenleaf's "Manual," Tripler's "Manual," Gordon's "Army Hygiene," and others of like nature.

My special acknowledgments are due to Brigadier-General J. K. Barnes, Surgeon-General U. S. Army, for permission to print authoritatively a list of reports and returns required of medical officers of the U. S. army; to Brevet Brigadier-General C. A. Crane, Assistant Surgeon-General U. S. Army, for his courtesy in answering numerous inquiries, and for furnishing me with a complete set of blanks, etc., as used in the Surgeon-General's Office at Washington; to Brevet Lieutenant-Colonel Warren Webster, Surgeon U. S. Army; Lieutenant-Colonel

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Thomas F. Edmands, 1st Corps Cadets, M. V. M., for valuable assistance and suggestions, and to Dr. Samuel A. Green for assistance in seeing it through the press, and to many others.

Although written especially for medical officers of the militia, I trust that the compilation of tactical requirements and other matters besides the list of reports and returns will render it of service to those of the regular army.

E. J. F.

Boston, 2*d July*, 1877.

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CONTENTS.

PREFACE 7
CONTENTS 9
GENERAL DUTIES OF THE MEDICAL OFFICER . . . 11
APPOINTMENT 12
RANK 13
UNIFORM 15
QUARTERS 16
TACTICS 17
Position 17
Salutes 17
Manual of Sword 18
About Face 20
HONORS 21
HORSEMANSHIP 22
INFANTRY 25
CEREMONIES 28
Dress-parade 28
Review 29
Inspection 30
Muster 31
MARCH 32
ARTILLERY 33
CAVALRY 33
POSITION ON STAFF OF GENERAL OFFICER 35
CORRESPONDENCE 36
MILITARY BOARDS 39
Court-martial 39
Board of Survey 39
Retiring Board 40
Board of Inspection 40
Board of Examination 40
EXAMINATION OF RECRUITS 41

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DISCHARGE OF SOLDIERS 43
ABSENCE ON SICK LEAVE 44
SURGEON'S OR SICK CALL 45
REPORTS 48
RECORDS 50
Meteorological Register 53
COPIES, ETC. 60
REQUISITIONS 61
SANITARY DUTIES AND SUGGESTIONS 68
HOSPITAL STEWARD 73
APPENDIX 74
Appointment and Rank 74
Uniform U. S. Army 77
Memorandum, etc., in regard to entering Medical Corps U. S. Army 82
Reports and Returns from Medical Officers U. S. Army . 85
Supply Table of Massachusetts 91
INDEX 95

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A MANUAL

FOR

MEDICAL OFFICERS.

GENERAL DUTIES OF THE MEDICAL OFFICER.

THE medical department is specially intrusted to the surgeon, under the general supervision of his commanding officer, who usually will have the suggestions of the surgeon carried out. While the immediate management of the medical department is under the surgeon's control, he can do but little without the aid and support of his commander, who will see that the surgeon does not neglect his duty to the sick.

The surgeon submits his plans and requisitions to his commander, who exercises his judgment as to the necessity and expediency of what is required, and issues the necessary orders, directs what may be necessary with regard to tents, buildings, etc., for hospital purposes; approves and directs the issues of fuel, forage, straw, provisions, etc.; causes details of men for nurses and attendants to be made.

The management of the sick is left entirely to the surgeon; he alone decides who are sick, who for that cause shall be excused from duty, who shall enter the hospital, prescribes their treatment, and makes the necessary

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regulations for the government of the sick in the hospital. These duties pertain exclusively to the medical officer, and are never interfered with in camp, garrison, or on the march.

A medical officer, on duty with an ordinary working party or detachment, while he cannot and should not exercise command regarding the character of the work, has nevertheless an advisory control as to the severity and amount of work imposed upon the men, and as to their physical comfort and sanitary surroundings. The officer in charge of the work should, as far as consistent with the exigencies of the occasion, conform to the counsel of the medical officer, and, if conflict arise, the point at issue should be submitted in writing, through proper channels (see page 36), to the commanding officer who detailed the officers for this duty.

Any orders of the medical officer should be given in the name of his commanding officer, *i. e.*, in the name of the power which places him upon the duty; and such orders should be consistently directed at one object, viz, the health of the party, neither neglecting anything which can secure this object, nor overstepping the bounds necessary to secure it.

APPOINTMENT.

In some States the governor has the power of appointing all staff officers; in others, he must have the advice of his council, or the consent of the senate. In one or two States they are elected, but generally the commander of each organization, entitled to one or more medical officers, makes the appointment, and the commission is issued by the governor.

In Massachusetts the appointment by the commanding officer is forwarded to the adjutant-general, by whom

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it is referred to the surgeon-general, who notifies the appointee to appear before a board of medical officers for examination; should he pass successfully, he is commissioned by the governor or commander-in-chief, and remains in commission, unless sooner discharged, until the successor of his commanding or appointing officer is qualified. Should he then be reappointed, he takes rank according to his original commission. (See *Boards of Examination*, p. 40.)

RANK.

In many of the States the law does not specify the rank of the medical officer. (See *Appendix.*)

In most of the States where a surgeon-general is allowed, he ranks as a brigadier-general; in a few as colonel, and in one as a lieutenant-colonel.

Assistant surgeon-generals are allowed in very few States, and rank either as colonels, majors, or captains. Surgeons on the staff of a major-general rank as colonels, lieutenant-colonels, or majors.

Surgeons on the staff of a brigadier-general rank as lieutenant-colonels, majors, or captains; and in Massachusetts rank as lieutenant-colonels and are styled medical directors. Regimental organizations are in most States allowed a surgeon, with the rank of major, captain, or first lieutenant; and an assistant surgeon ranking as a captain or first lieutenant.

Battalion organizations are allowed a surgeon with the rank of major, captain, or first lieutenant; or only an assistant surgeon with the rank of captain or first lieutenant. In some States battalions are allowed both a surgeon and assistant surgeon.

In New York a battalion of cavalry is allowed a veterinary surgeon with the rank of second lieutenant.

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The hospital steward is a *non-commissioned officer*, and ranks with ordnance sergeants, and next above the first sergeant of a company. He is therefore the lowest in rank of the non-commissioned staff.

While it should be understood that rank in the staff carries with it no right to command except in the department to which the officer belongs,[1] it entitles officers holding such rank to choice of quarters, and to precedence according to rank and date of commission in courts, boards, and councils, at social ceremonies, and to the military honors of that rank. In all matters relating to the medical department, the medical director, or senior surgeon acting as such, may directly summon the members of the medical staff belonging to his brigade, without special orders from the adjutant-general's department.

Medical officers have usually been addressed as "Surgeon," or "Doctor," and, as a general rule, prefer to be spoken of or to in this manner; but custom now allows, and it is perfectly proper to address them according to their rank.

Surgeons, or assistant surgeons, sign themselves simply as

——— ———,
Surgeon —— *Regt.*

or,

——— ———,
Assistant Surgeon —— *Regt.*

[1] "An officer of the Pay or Medical Department cannot exercise command except in his own department; but, by virtue of their commissions, officers of these departments may command all *enlisted* men, like other commissioned officers." — *Army Regulations.* For example, in action, or when from any cause the regiment or organization is without commissioned line officers, the senior staff officer takes command, and not the senior sergeant.

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unless they have brevet rank, in which case it is often written thus, — ———— ————,

Assistant Surgeon, and Brevet Lieutenant-Colonel.

[or other rank, as the case may be.]

Brevet rank is now never used officially, except with a signature.

UNIFORM.

The uniform of militia medical officers is generally the same as that prescribed for medical officers of the United States army, and is given in the appendix.

The use of the green sash has been abolished. The sword is a small straight one, cross-hilted without hand guard, and is known as the medical department sword.

Many militia organizations have their uniforms of other colors than that of the army.

The "Regulations for the Uniform and Dress of the Army of the United States," illustrated, was published in July, 1872,[1] and copies for consultation can generally be found with military tailors, and dealers in military equipments.

Medical officers in the army belong to the medical corps or staff, and are not *regimental* officers; while in the militia in most States they are not members of a corps, but belong to the particular organization to which they have been appointed and commissioned; for this reason they are considered as regimental officers, and in many organizations, instead of wearing the uniform described at length in the appendix, wear the distinctive uniform of their regiment or battalion, with the sword, knots, etc., of the medical staff.

[1] So much as refers to braid on the undress coat, slashing it at the sides, and wearing the sword belt under it, has been annulled by War Department G. O., No. 96, 19th November, 1875.

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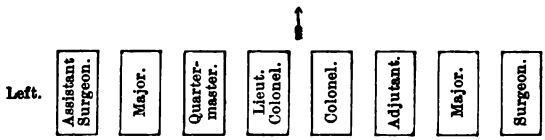
The epaulette, if worn, bears upon it in gold a wreath with the Old English letters, M. S.

The full uniform and side-arms should be worn when visiting officially the headquarters of a superior officer. There may be occasions of routine or office business where side-arms and full uniform may be dispensed with; but they should be worn whenever an officer is summoned to appear, or in any way "reports for duty."

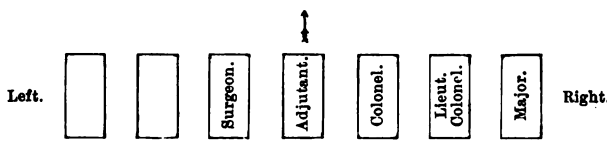
QUARTERS.

Surgeons are allowed in camp two tents, assistant surgeons one. These are furnished by the quartermaster.

The position of the tents of the medical officers in militia camps has generally been that given on page 77 of the Army Regulations of 1863, thus: —



The present tactics (Upton's) place the staff officers according to rank on the left of the adjutant, who is on the left and next to the colonel, thus: —



The assistant surgeon, quartermaster, and paymaster or mustering officer, if there be one, will take quarters according to rank. The positions at the extreme right and left of the field and staff officers' tents seem the best

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for medical officers, as, in cases of sudden calls, or in the night, they can there be more easily found.

The manner of placing the tents and assigning quarters is, however, subject to the orders of the commanding officer.

TACTICS.

POSITION OF A SOLDIER.

The position of the soldier is, —

Heels on the same line, and as near each other as the conformation of the man permits.

The feet turned out equally, and forming with each other an angle of about sixty degrees.

The knees straight, without stiffness.

The body erect on the hips, inclining a little forward.

The shoulders square, and falling equally.

The arms hanging naturally.

The elbows near the body.

The palms of the hands turned slightly to the front, the little fingers behind the seams of the trousers.

The head erect and square to the front.

The chin slightly drawn in, without constraint.

The eyes straight to the front, and striking the ground at about the distance of fifteen yards.

The medical officer who has had no military experience should carefully study and practice the "School of the Soldier," as given in "Upton's Infantry Tactics," pages 9 to 29 inclusive.

SALUTES WITH THE HAND, FOR OFFICERS.

(*First motion.*) Raise the right hand till the tips of the fingers touch the visor opposite the right eye, the thumb closed, the fingers and hand extended in prolongation of the forearm, elbow down.

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(*Second motion.*) Lower the hand briskly and to the right, till the point of the fingers are at the height of the shoulder and in front of it, the elbow advancing slightly; the hand and fingers still extended in prolongation of the forearm.

(*Third motion.*) Drop the hand by the side.

MANUAL OF THE SWORD.

1. *Draw*, 2. SWORD.

At the command *draw*, unhook the sword with the thumb and first two fingers of the left hand, thumb on the end of the hook, fingers lifting the ring; grasp the scabbard with the left hand at the upper band; bring the hilt a little forward, seize the gripe with the right hand, and draw the blade six inches out of the scabbard, pressing the scabbard against the thigh with the left hand. At the command *sword*, draw the sword quickly, raising the arm to its full extent, at an angle of about forty-five degrees, the sword in a straight line with the arm, and make a slight pause; hook up the scabbard with the thumb and first two fingers of the left hand, thumb through the upper ring, fingers supporting it, and drop the left hand by the side; at the same time bring the back of the blade against the shoulder, the blade vertical, back of the gripe to the rear, the arm nearly extended, the thumb and forefinger embracing the gripe, the left side of the gripe with the thumb against the thigh, the other fingers extended and joined in rear of the gripe. *This is the position of carry sword.*

Officers mounted unhook the sword before mounting, and, in the first motion of *draw sword*, reach with the right hand over the bridle hand, and without the aid of the bridle hand draw the sword as before; the right hand in the *carry* rests on the right thigh.

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When the sword-knot is worn, the right wrist may be placed in it in the first motion, before grasping the gripe.

1. *Present*, 2. SWORD.

At the command *present*, carry the sword vertically to the front, raising the hand as high as the neck, and six inches in front of it, the thumb on the back of the gripe, back of the gripe to the right, elbow close to the body.

At the command *sword*, drop the point of the sword by extending the arm, so that the right hand may be brought to the side of the right thigh, the back of the hand down, the blade inclining downward and to the front.

1. *Carry*, 2. SWORD.

Resume the carry.

In rendering honors with troops, officers execute the first motion of the salute at the command *present*, the second motion at the command *arms*. The sword is returned to the *carry* at the command, 1. *Carry*, 2. ARMS.

When arms are *ordered*, the officers and non-commissioned staff drop the points of their swords, the back of the hand up. At *parade rest*, they clasp the hands in front of the centre of the body, the left hand uppermost, the point of the sword between the feet.

In marching in double time, the sword is carried diagonally across the breast, edge to the front, the point in front of and at the height of the left shoulder; the left hand steadies the scabbard.

At funeral ceremonies, the sword is reversed under the right arm, the left hand clasping the blade behind the back. When the escort *rests on arms*, the officers stand at *parade rest*, inclining the head.

Officers on all duties under arms, draw and return

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sword without waiting for any command. All commands to soldiers under arms are given with the sword drawn.

In route marches the sword is carried in the scabbard.

The non-commissioned staff, and sergeants with swords drawn, salute by executing the first motion of *present sword*, as explained for officers. This position is taken at inspection, and the wrist turned outward to show the flat of the sword toward the face.

1. *Return*, 2. SWORD.

At the command *return*, take the position of the first motion of *present sword;* at the same time unhook and lower the scabbard with the left hand, and grasp it at the upper band. At the command *sword*, carry the right hand opposite and six inches from the left shoulder; lower the blade and pass it across and along the left arm, the point to the rear; turn the head slightly to the left, fixing the eyes on the opening of the scabbard, and insert the blade six inches in the scabbard. (Two.) Return the blade, free the hand from the sabre-knot (if inserted in it), turn the head to the front, and drop the right hand by the side; at the same time hook up the sword with the left hand, turning the sword toward the body, the guard to the rear, and drop the left hand by the side.

Officers mounted return swords without using the left hand; the sword is hooked up on dismounting.

ABOUT FACE, FOR OFFICERS.

At the command *about*, carry the toe of the right foot about eight inches to the rear and three inches to the left of the left heel, without changing the direction of the foot. At the command *face*, turn upon the left heel and right toe, face to the rear, and replace the right heel by the side of the left.

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The non-commissioned staff face about as prescribed for officers.

HONORS.

Courtesy among military men is indispensable to discipline; respect to superiors will not be confined to obedience on duty, but will be extended on all occasions.

All officers will salute each other when they meet, the inferior making the first salute.

Officers under arms salute with the sword or hand according as the sword is drawn or in the scabbard.

Officers salute with the sword, or hand, in making and receiving all official reports, the junior making the first salute.

On official occasions, officers, when under arms in-doors, do not uncover, but they salute with the sword or hand, according as the sword is drawn or in the scabbard; when in-doors and not under arms, they uncover and stand at attention, but do not salute.

An officer mounted dismounts before addressing a superior officer not mounted.

Officers will at all times acknowledge the courtesies of enlisted men. When returning the salute of enlisted men, officers salute as prescribed in the tactics. (See *ante*, p. 17.)

When several officers in company are saluted, all who are *entitled* to the salute return it.

Officers above the rank of captain are saluted by sentinels with a *present arms;* all others by a *carry arms.*

Men with arms, out of ranks and not sentries, salute all officers by bringing the piece to the *carry*, and the left hand across the body, so as to strike the piece near the right shoulder, remaining in this position until their salute is noticed; this is technically known as the "sergeant's salute."

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All officers should be as alert to acknowledge salutes as sentinels are required to be in giving them, and no officer should allow an omission of the proper salute by a sentinel to pass without notice, that is, without reporting it to the officer of the day having control of the guard in which such neglect occurs; and any officer of the day so notified will be very thankful to the officer so reporting.

HORSEMANSHIP.

Medical officers being usually mounted, the following directions for mounting, etc., condensed from the cavalry tactics, are here inserted: —

STAND TO HORSE.

Stand facing the front on the near (left) side of the horse, the breast on a line with the lower jaw of the horse, in position of a soldier, except that the right hand, nails down, grasps both reins, six inches from the bit.

TO MOUNT.

Being at *stand to horse*, face to the right, dropping the right rein from the hand, take two side steps to the right, sliding the hand along the left rein; make a half face to the left, so as to bring the right side towards the horse's flank; carry the right foot three inches to the rear; take the reins with the right hand, aided by the left, and place the right hand on the pommel, the reins coming into the hand between the thumb and forefinger, and held so as to feel lightly the horse's mouth. The left foot is inserted one third its length into the stirrup, with the assistance of the left hand if necessary, and supports it against the forearm of the horse; resting upon the ball of the right foot, place the left hand on the top of the neck, well forward and grasp a lock of the mane, the lock

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coming out between the thumb and forefinger, then spring from the right foot, holding firmly to the mane, keeping the right hand on the pommel; bring the heels together, the knees straightened and resting against the saddle, the body erect, then pass the right leg, extended over the croup of the horse, without touching him; let the body come gently into the saddle; let go the mane, insert the right foot in the stirrup, pass the reins into the left hand, and adjust them.

The stirrups should support the weight of the legs only, and be of such length that on rising in them, there shall not be a space of more than four or five inches between the rider's crotch and the saddle.

TO DISMOUNT.

Seize the reins with the right hand, in front of, and near the left; place the right hand on the pommel; let go with the left hand, place it on the top of the neck; grasp a lock of the mane, the lock coming out between the thumb and forefinger, and take the right foot out of the stirrup, keeping the body erect. Rise upon the left stirrup; pass the right leg extended over the croup of the horse without touching him; bring the right heel to the side of the left; descend lightly to the ground; remove the left foot from the stirrup, and place it by the side of the right, keeping the body erect; let go the mane; pass the end of the reins over the pommel of the saddle with the right hand, which then seizes the left rein, face to the left, take two short steps, left foot first; slip the right hand along the left rein, and take the position of *stand to horse.*

POSITION MOUNTED.

The buttocks bearing equally upon the saddle, and as far forward as possible.

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The thighs turned upon their flat side without effort, embracing the horse equally, and stretched only by their own weight and that of the legs.

The knees bent without stiffness.

The legs and feet free, and falling naturally, the feet parallel to the horse.

The body erect and unconstrained.

The shoulders thrown equally back.

The arms free, the elbows falling naturally.

The head erect, square to the front, and without constraint.

The reins coming into the left hand on the side of the little finger, and leaving it between the thumb and forefinger; the little finger between the reins, the other fingers closed, the thumb pressing the reins firmly on the second joint of the forefinger; the left fore-arm horizontal, the fingers six inches from the body and turned toward it; the little finger a little nearer the body than the upper part of the hand; the right hand behind the thigh, the arm falling naturally, the feet inserted one third of their length in the stirrups, the heels slightly lower than the toes.

In the army one rein only is used at a time, either the watering bridle or the curb, therefore the tactics from which the foregoing directions have been taken do not give the manner of holding both together. In the militia it is generally the custom to use both the curb and the snaffle-rein, in which case the simplest and easiest manner of holding them, as proved by experience, is to take the curb as has been described, and allow the snaffle to enter the hand on either side of the middle finger, the bight or end passing over the forefinger. The thumb then commands either curb or snaffle at pleasure.

The ends of the reins should fall between the right reins and the neck of the horse.

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INFANTRY.

POSITION IN LINE, ETC.

POSTS OF REGIMENTAL STAFF.

Staff officers are supposed to be mounted during all manœuvres.

The colonel is posted thirty (30) yards in rear of the line of file closers (who are two (2) yards in rear of rear rank), opposite the centre of the battalion. This distance is reduced as the front of the battalion is diminished.

The surgeon, quartermaster, and other staff officers in the order of rank, from right to left, are on the left of the colonel, and three (3) yards in his rear, *i. e.*, thirty-three yards to the rear of the file-closers; the senior staff officer (surgeon) being opposite the centre of the battalion, the others on his left.

The quartermaster-sergeant, commissary-sergeant, and hospital steward are in rear of the left centre company, in the order of rank, from right to left, three (3) yards on the right, and in line with the front rank of the band; in all manœuvres they conform to the movements of the band.

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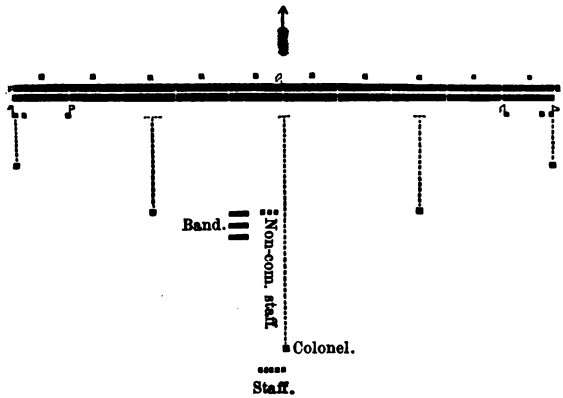
Diagram No. 1.

Showing Position of Staff and Non-Commissioned Staff Officers in Line.



In column, the staff marches abreast of the centre, on the flank opposite the guide, and at the same distance from the column, as from the file-closers, when in line.

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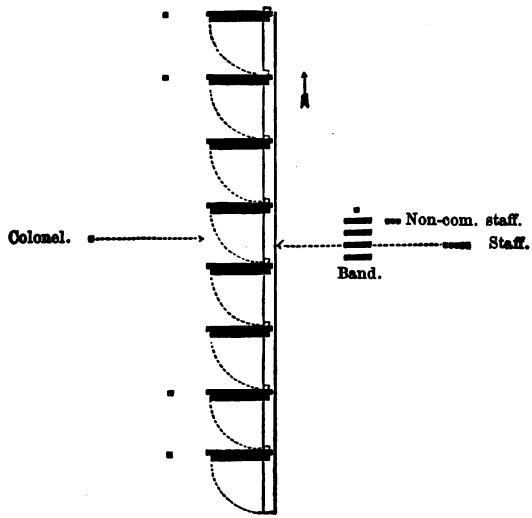
DIAGRAM No. 2.

Showing Position of Staff and Non-Commissioned Staff, when in Column.



If the guide be changed, the staff, unless otherwise directed, passes by the rear of the column to the opposite flank. In line, if the battalion wheels about by fours, the staff, unless otherwise directed, passes around either flank, to its new position in rear.

In all battalion manœuvres, the staff moves to its new position in line or column, by the shortest practicable line, not passing between sub-divisions (companies).

The staff, and non-commissioned staff, except the adjutant and sergeant-major, may be and usually are excused

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from battalion manœuvres, except when preparing for forms of ceremony.

CEREMONIES.

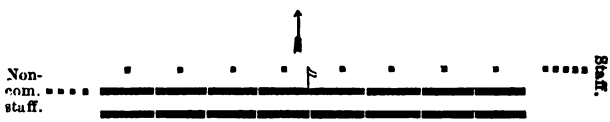
The ceremonies with which the medical officer should acquaint himself, are, dress parade, review, and inspection, at all of which he is dismounted, unless the reviewing officer be mounted.

DRESS PARADE.

The staff take position as in line. (*Diagram No.* 1.) At the command *Rear open order*, MARCH, the staff officers in the order of rank, from right to left, place themselves one (1) yard apart, and one (1) yard to the right of the line of company officers. The non-commissioned staff (hospital steward), the sergeant-major on the right, form similarly on the left of the front rank of the battalion.

DIAGRAM No. 3.

Showing Position of Staff and Non-Commissioned Staff, after the Order to the "Rear Open Order" has been executed



At the command *parade is dismissed*, the officers return their swords and face towards the centre, upon which they close and successively face to the front, then march under command of the adjutant, forward to within six yards of the commanding officer, where he is saluted with the right hand, which remains at the visor until the salute is acknowledged, and drops at the same time with the hand of the commanding officer.

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Medical officers are seldom required to be present at this ceremony.

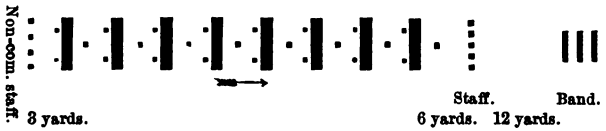
At a brigade dress parade, the battalion is in double column, the staff (except the adjutant) is abreast the first division, the right of the staff six (6) yards to the right of the division; the non-commissioned staff is on a line equal to the front of the column, six (6) yards in rear of the last division.

REVIEW.

The staff takes its position as in line. (*Diagram No.* 1.) At the command *Rear open order*, MARCH, the staff moves to the line of company officers as at dress parade (page 28). At the command *Close order*, MARCH, the company officers return to their places, but the staff remain until the command is given *Companies right wheel*, MARCH, when they place themselves in order of rank, from right to left, on a line equal to the front of the column, six (6) yards in front of the leading captain. The non-commissioned staff place themselves in a similar manner, six (6) yards in rear of the file-closers of the rear company.

DIAGRAM NO. 4.

Showing Position of Staff and Non-Commissioned Staff, after the Order "Companies Right Wheel" has been executed, preparatory to marching in review.



The colonel and staff salute together, turning the head towards the reviewing officer, when the colonel is at six (6) yards from the reviewing officer, and return to the carry when the colonel has marched six (6) yards beyond him.

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The non-commissioned staff salute, and return to the carry at the points prescribed for the colonel.

Staff, and non-commissioned staff without swords, do not salute.

In passing in review in double time officers do not salute, the swords being carried diagonally across the body.

Street parades are generally considered as reviews, therefore the medical staff rides at the head of the column, and not at the rear, as in other marches in column. But in street parades of great length, or under circumstances of hardship, whether due to the sun or to extreme cold, the medical officer may be directed by his commanding officer to march in the rear of the column.

In any event, whether on the march, in action behind the line of battle, or only on parade, it is the duty of the medical officer to see that no straggling occurs under pretext of attending the sick or wounded.

If soldiers have been permitted to leave the ranks to assist others who are disabled, the surgeon should, in the name of his commanding officer, order back to their companies all the men with whom he can dispense, and do so with all possible promptness; and by so doing, not only increase the efficiency of his particular organization, but also preserve its good name.

INSPECTION.

The staff takes position as in line (page 26). When the battalion breaks into column of companies, the staff wheel in the same direction, and remain stationary until the order is given *Field and staff to the front*, MARCH. The commissioned officers thus designated form in order of rank from right to left, field on the right, on a line equal to the front of the column, six (6) yards in front of the colors.

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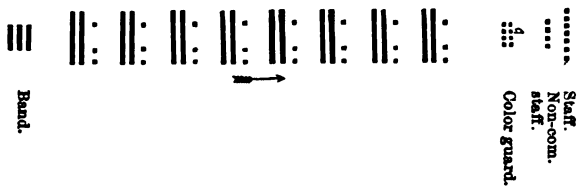
The non-commissioned staff (hospital steward) form in a similar manner, three (3) yards in rear of the field officers.

DIAGRAM No. 5.

Showing Position of Staff and Non-Commissioned Staff after the Order "Field and Staff to the Front" has been executed preparatory to inspection.



Such field and staff officers as may be superior in rank to the inspecting officer, do not take post in front of the column, but accompany him.

As soon as inspected, the field and staff return their swords, and accompany the inspecting officer.

MUSTER OR ROLL-CALL.

This follows an inspection. The adjutant provides himself with the muster-roll of the field and staff, therefore these officers are not required to answer personally to their names; the inspecting officer and mustering officer being usually the same person, has already verified their presence at inspection. When, as in Massachusetts, the mustering officer is a staff officer appointed for the special duty of mustering, he should know who were with him at the inspection.

After muster the presence of the men reported in the hospital is verified by the mustering officer, who is accompanied by the company commanders.

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MARCH.

When the battalion is advancing in line, the staff maintain the position indicated in Diagram No. 1. Advancing by column the position of the staff is indicated by Diagram No. 2.

Should the order then be to advance by flank of subdivisions (companies), the position is relatively the same, being in rear of the centre subdivision.

When marching in double column, *i. e.*, two companies abreast, the staff and band march in rear of the column. If the column marches to the rear, the band, preceded by the staff, marches twelve yards in front of the column. In the march by the flank the staff and band remain in their relative positions on the flank of the division nearest them. That is, the staff officers face to the right or left as the case may be, and march for the time being in single file.

In long marches in the route step, the surgeons and hospital steward march at the rear of the column.

In order to prevent the accumulation of stragglers at the rear under pretext of seeing the surgeon, it is advisable for one of the medical officers to ride occasionally to the head of the column, and permit it to pass him on the march. Any man feeling ill can then see him, and have his case decided upon, without the necessity of falling behind his company. When a medical officer makes this movement, he should be careful always to pass to *leeward* of the column, that the dust he raises may be carried away from the men.

The tactics prescribe that no man shall leave the ranks without permission from his captain; if he needs medical attendance, the captain gives him a pass to the surgeon, bearing his name, company, and regiment; if he

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is unable to return to his company, the surgeon admits him to the ambulance, if there be one, or indorses the pass stating that he is permitted to fall out on account of sickness.

ARTILLERY.

BATTALION FORMATION.

The major or senior officer present commands the battalion, and in line is twenty-eight yards in front of the centre.

The adjutant is in line with the chiefs of platoon, and three yards outside of the right flank of the battalion. When the battalion faces to the rear, the adjutant executes an *about* and takes his place in line with the chiefs of platoon, but does not change to the other flank.

The sergeant-major is in similar position on the left flank; the other non-commissioned officers in the order of rank, the senior on the right, are in line on his left; when the battalion faces about they are on his right.

At review, other staff officers, in line, are on the right of the adjutant; in column, they are in rear of the major or commanding officer.

On all other occasions, they accompany the major or commanding officer.

Ceremonies, etc., dismounted, conform as nearly as possible to those prescribed for infantry.

CAVALRY.

POSITION IN LINE, ETC., IN REGIMENT FORMED AS ONE BATTALION.

The staff are in one rank, the senior on the right, the right of the adjutant, who is on the line of chiefs of platoon and three yards outside the flank of the battalion.

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OPEN ORDER.

In taking open order, the staff officers move forward and take their places abreast of the line of company officers.

IN COLUMN.

The staff march at the head or rear of the column, according as the column was formed toward their flank, or the flank opposite. In marching by the flank of subdivisions, they are abreast the head of the nearest subdivision.

NON-COMMISSIONED OFFICERS.

The sergeant-major is posted in line with the rank, three yards from the left flank, the other non-commissioned officers in the order of rank, the senior on the right, are in line on his left. When the battalion faces about, they are on his right. In column, they march at the head or rear, according as the column was formed toward their flank, or the flank opposite.

In route marches the surgeons are in rear of the column.

REGIMENT FORMED WITH MORE THAN ONE BATTALION.

The colonel is accompanied by his staff officers, sergeant-major, and trumpeter. The adjutant is on the left of the colonel; the other staff officers, in line, in the order of rank from right to left, in rear of the colonel and adjutant; the sergeant-major and trumpeter in rear of the staff officers.

At inspection of cavalry the staff officers are posted fifteen (15) yards in front of the standard (colors), instead of six yards, as in the infantry.

All other ceremonies, etc., are made to conform as nearly as possible to those of infantry.

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POSITION OF MEDICAL OFFICER ON THE STAFF OF A GENERAL OFFICER.

ON MANŒUVRES.

The general is attended by his personal staff; the adjutant-general riding on his left, his aides-de-camp in rear, the senior on the right.

The officers of the quartermaster's, medical, and pay corps, are usually excused from appearing at manœuvres, being at such times generally occupied by duties in their respective departments.

ON THE MARCH.

The other members of the staff than the adjutant-general and aides-de-camp, march according to rank in rear of the aides-de-camp, the senior of each rank on the right.

DRESS PARADE AND REVIEW.

The staff of the general, except the adjutant-general, take position in single rank, six yards in his rear. At a review, when other officers and personages accompany the reviewing officer, they place themselves on the left of the staff of the reviewing officer, their own staffs in their rear.

MARCHING IN REVIEW.

The general having saluted the reviewing officer, he places himself on the right of that officer, his staff in single rank on the right of the staff of the reviewing officer.

In giving and returning salutes, staff officers act with their general.

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CORRESPONDENCE.

"All official correspondence between the heads of the different departments of the staff of any command, and its commander, must pass through the adjutant-general, assistant adjutant-general, or adjutant of the command, as the case may be." — *Army Regulations.*

"Rolls and returns will be accompanied by a letter of transmittal, enumerating them, and referring to no other subject." — *Army Regulations.*

"Generally, officers who forward communications, indorse on them their remarks or opinions, without other letters of transmittal." — *Army Regulations.*

Official letters should be written on letter-paper (quarto-post), whenever practicable, and not on note or foolscap paper. A margin of one eighth the width should be left on the left hand of the first and third pages, and on the right hand of the second and fourth pages. This margin is left so that the letters may be bound if desired.

Letters should generally refer to one matter only.

The sheet should be folded in three folds (four folds for foolscap paper, if used), parallel with the writing, and indorsed on the first fold, which is understood to be the one at the top of the page, with the place, date, name, and a summary or "briefing" of the contents, thus: —

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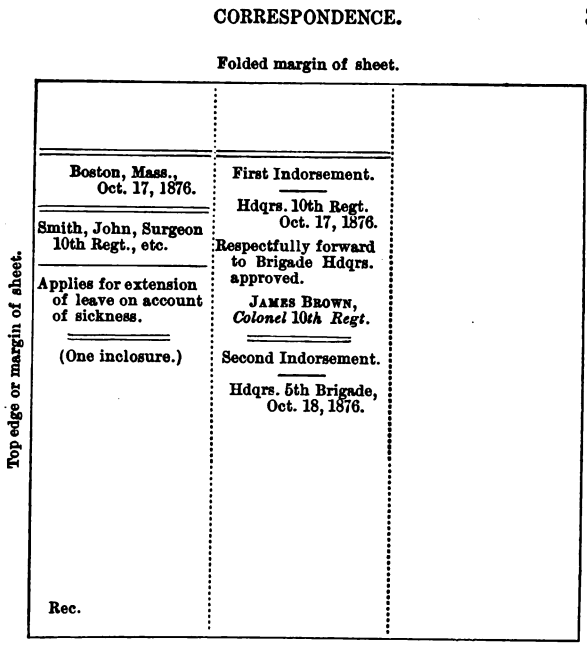

One inch space is left above the ruled lines over the date; this is for office marks, generally in red. The space under the briefing is left for the dates when received at different headquarters, and notes of inclosures. The first indorsement is so headed, and should be on the second fold.

Should the indorsements fill both second and third folds, paper folded like a sheet, but of the width of a fold, is pasted on the bottom edge; this will thus give four sides for indorsements, and more may be added in the same manner and to the same place if required.

Letters and orders kept on file are indorsed in the same manner.

Inclosures will bear the same "office marks" as the

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letter inclosing them, placed across the middle of the first fold; they will be numbered consecutively.

For example: If a communication covers one inclosure, it is numbered 1, above the office marks. When an officer to whom the letter is referred incloses a paper in addition to his indorsement, the additional inclosure is numbered 2, and below the office marks is noted the *number* of the *indorsement* made by the officer submitting the inclosure.

The original inclosures are noted on the first fold of the letter covering them, just below the briefing, and below this are noted successively the inclosures of the several indorsements.

The cover or envelope will be marked on the left hand upper corner "Official Business," often abbreviated "O. B."

In writing the address of an officer, his title precedes and his regiment or corps follows his name, as: —

COLONEL JOHN SMITH,
100th Regiment U. S. Infantry.

In a signature, titles, etc., follow the name, as: —

Very respectfully,
Your obedient servant,
JOHN JONES,
Lieut.-Colonel and Medical Director
3d Brigade, M. V. M.

Letters intended for the officer holding an office, but not especially for the incumbent for the time being, are addressed without specifying any name, so that in case of change the successor will have authority to open them, viz: —

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The Commanding Officer,
Fort Grant.
To the Medical Director of the Second Brigade.
To the Adjutant-General,
State House.

MILITARY BOARDS.

The medical officer may be detailed as a member of a court-martial, or of a military board.

The senior officer detailed acts as president, the junior as recorder.

The proceedings, records, etc., of all boards conform as nearly as possible to that prescribed for the government of courts-martial by the Army Regulations of 1863.

COURT-MARTIAL.

Surgeons may be detailed as members of a court-martial, but are generally excused if other officers can be detailed. Their principal duties being professional they are practically always "on duty;" for the same reason, except for an aggravated offense they are not put under arrest until the court convenes. Even when under arrest they may be required by their commanding officer to perform the duties of their office.

BOARD OF SURVEY.

The function of this board is to determine administrative responsibility. When property becomes damaged, except by ordinary wear and tear, or unsuitable for service from some unusual cause, the officer responsible for the property, if he had committed no fault or neglect, would usually ask for a board of survey, to relieve him from the responsibility of the damage or loss.

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Surgeons will generally be members of such boards in cases where medical officers are interested, or medical property involved.

The authority, etc., of boards of survey is given in the Army Regulations.

RETIRING BOARD.

From the nature of the service, there are no retired officers in the militia, consequently a board of this kind never convened. In the regular service two fifths of the members of such a board must by law be medical officers. (Act of Congress, 3d March, 1861.)

BOARD OF INSPECTION.

When in service recruits are carefully inspected on the third day after their arrival in camp or garrison, by the commanding officer and surgeon, and should anything be found to disqualify a recruit from performing the duties of a soldier, a board of inspectors will be assembled to examine into and report upon the case. Such a board consists of the commanding officer, the senior medical officer, and the three senior regimental officers present. — *Army Regulations.*

BOARD OF EXAMINATION.

In the regular service, boards of examination have been adopted in several branches of the service by law (and will probably become general), for the purpose of inquiring into the qualifications of officers already in the service, or of candidates for appointment.

Massachusetts, by statute, requires line officers to be examined by a board consisting of the judge advocate general, and two persons well versed in military knowledge. It also requires that "No surgeon or assistant

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surgeon shall be commissioned until he shall have furnished evidence to the commander-in-chief (*i. e.*, the governor) that he is competent to perform the duties of his office." (Sect. 22, chap. 320, Acts of 1874.)

To obtain this evidence a board of medical officers was organized to examine all medical appointees and ordered to meet as occasion should require. (G. O. No. 23, A. G. O. Series, 1874.)

The board at present consists of five members. (G. O. No. 24, A. G. O. Series, 1876.) The examinations, which are partly written and partly oral, are held at the State House.

Connecticut requires that the surgeon-general shall examine and determine upon the qualifications of surgeons, assistant surgeons and hospital stewards.

New York requires that all medical officers shall be graduates of some incorporated school of medicine, and commissioned by the commander-in-chief on the recommendation of the surgeon-general.

In Kansas, the law, speaking of the surgeon-general, says that he "shall be *ex-officio* chairman of any board of surgeons convened for the purpose of examining those who may desire position in the medical staff of the State."

These few States are the only ones which have by law made any provision in regard to the qualification of the medical officers.

EXAMINATION OF RECRUITS.

In order that an army should be efficient, whether consisting of regulars or militia, it is essential that those composing it should be able-bodied, and to this end every recruit should be examined by a medical officer; an ordeal which the militia-man in Massachusetts, at least, is seldom required to pass.

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The regulation for the examination of recruits is as follows: —

"In passing a recruit the medical officer is to examine him stripped; to see that he has free use of all his limbs; that his chest is ample; that his hearing, vision, and speech are perfect; that he has no tumors, or ulcerated or extensively cicatrized legs; nor rupture or chronic cutaneous affection; that he has not received any contusion, or wound of the head, that may impair his faculties; that he is not a drunkard; is not subject to convulsions; and has no infectious disorder, nor any other that may unfit him for duty."

Should it ever become a part of the duty of a militia surgeon to examine recruits, a careful perusal of any one or all of the following manuals will be of service.

"Hints on the Medical Examination of Recruits for the Army," by Thomas Henderson, M. D., etc., revised edition by Richard H. Coolidge, Assistant Surgeon U. S. A. Philadelphia, 1856.

"Manual of the Medical Officer of the Army of the United States, Part I. Recruiting and the Inspection of Recruits," by Charles S. Tripler, M. D., Surgeon U. S. A. Cincinnati, 1858. (*This Part No. I. was the only one published.*)

"Manual of Instructions for Military Surgeons on the Examination of Recruits and Discharge of Soldiers," etc., by John Ordronaux, M. D., etc. New York, 1863.

"A Manual of Instructions for Enlisting and Discharging Soldiers," etc., by Roberts Bartholow, A. M., M. D., etc. Philadelphia, 1863.

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DISCHARGE OF SOLDIERS.

No soldier can properly be discharged on account of physical disability, except upon a surgeon's certificate to that effect.

The form prescribed for the army will not answer for the militia when not in active service, the reason being that the surgeon cannot, on account of the companies being so scattered, always examine personally every disabled soldier.

In Massachusetts a modified form has been adopted, which seems to meet the wants of the militia, and is given below.

In cases where the examination is made by another physician, the surgeon will so state on the certificate, and, if possible, vouch for the examiner; he will obtain from the physician a certificate of his examination which he will retain as his voucher.

The surgeon should keep copies or duplicates of all certificates signed by him.

The original is forwarded to the adjutant.

Volunteer Militia.

Certificate of Disability for Discharge.

[To be used in all cases of Discharge on account of Disability.]

———, a ———, of Captain ———'s Company —, of the ——— {Regiment / Battalion} ——— Volunteer Militia, was mustered in at ———, on the ——— day of ———, 187–, to serve three years.

Said soldier has been unfit for duty. (*The company commander will here give the time when the soldier became*

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disabled, and all facts he may know in relation to the cause, character, etc., of the disability.)

Station, ———.

Date, ———.

——— ———,

Commanding Company.

I certify that the said ———, of Captain ———'s Company, is incapable of performing the duties of a soldier, because of (*Here insert cause of disability*).

(*Where the examination is made by the surgeon personally, the words "I have carefully examined" will be inserted before "the said," etc.*)

——— ———,

Surgeon ——— {Regiment. Battalion.

Date, ———, 187–.

ABSENCE ON SICK LEAVE.

In many of the States a fine is incurred by non-attendance at drills, meetings, or camp duty, unless a certificate of sickness is furnished from a physician in good standing, or, preferably, from the regimental surgeon.

There being no regular form of certificate for this purpose, the one used for officers of the army applying for leave of absence is here given, slightly modified to meet the requirements of the militia.

Certificate of Disability for Absence.

———, a ———, of Captain ———'s Company — of the ——— {Regiment Battalion} ——— Brigade, ——— Volunteer Militia, having applied to me for a certificate upon which to ground an excuse for absence from (*Here state duty*).

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I do hereby certify, upon honor, that I have carefully examined the said ——— and find that (*Here state disease or cause of disability*), and that in consequence thereof he {is, or was,} in my opinion, unfit for duty.

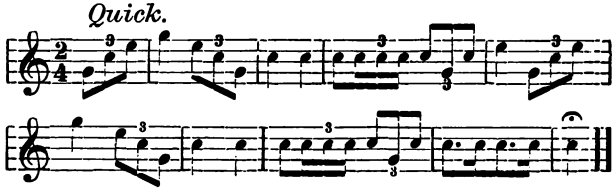
I further declare my belief that he {was not / will not be} able to resume his duties for (*Here state the number of days or weeks*).

Dated at ———, this ——— day of ———, 187–.

(Signature) ——— ———, *M. D.*

SURGEON'S OR SICK CALL.

In camp, an hour is always fixed by the commanding officer for each particular duty. At the proper time surgeon's call is sounded.



This is usually a quarter of an hour before or after breakfast, sufficient time before the adjutant makes his morning report, that he may have from the surgeon the report of the number of sick.

Upon marches, this call is usually sounded as soon as the hospital tent is pitched and arranged at the close of the day's march.

"At the surgeon's call the sick then in the companies will be conducted to the hospital by the first sergeants, who will each hand to the surgeon, in his company sick book, a list of all the sick of the company, on which the surgeon will state who are to remain or go into hos-

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pital; who are to return to quarters as sick or convalescent; what duties the convalescents in quarters are capable of; what cases are feigned; and any other information he may have to make to the company commander." — *Army Regulations.*

The form of the company sick book, as used in the army, and in the militia of Massachusetts, is given on p. 47. This being signed by the surgeon, is the voucher that men are excused from duty on account of sickness.

The surgeon writes in the appropriate column the name of the disease (and if feigned he so states it), whether the man shall remain in quarters or hospital; if the former, what duty he is capable of performing, and then signs his name. This places the man under the control of the surgeon, and not until he has returned him to duty, by an entry in the proper column, can the company commander order the soldier to *any duty*, unless such is specified by the surgeon.

Unless for some reason the surgeon has returned a man to duty (which he can do at any time, by sending for the company sick book, and making the proper entry) before the next morning sick call, the first sergeant must see that the man reports to the surgeon then, and every subsequent morning until properly returned to duty.

Excepting in an emergency, the surgeon will not attend a case of sickness unless properly entered in the sick book, and brought to him with the latter, by the first sergeant. The custom of the service allows the book to be brought up by any non-commissioned officer.

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SICK REPORT OF COMPANY Regiment Battalion OF M. V. M. for 187 .

ENTRIES TO BE MADE BY THE FIRST SERGEANT.					SURGEON'S REMARKS.			
Name of Patient.	Rank.	Date when taken sick.	No. of times reported sick by the surgeon during the year.	No. of days on sick report during the year.	Disease. (If feigned, so state.)	Whether sick in quarters or in hospital.	Of what duty capable when sick in quarters.	When returned to duty.

* The above cases have been examined by me before being sent to the surgeon.

_____,

Captain (or *Lieut.*) *Company* —.

* The examination may be made and the list signed by any commissioned officer of the company.

_____,

Attending Surgeon.

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Immediately after the examination of the sick, the morning report is made out. (See under *Reports.*)

Only those are entered on the morning sick report who have been excused and so entered on the company sick book at sick call. Cases of sickness occurring after the report is sent to the adjutant, and not excused the following morning at surgeon's call, are not in any way *returned* as sick, except as entered in the company sick book.

On the morning sick report of a station or camp, no account will be made of the sick other than those actually *present* at such station or camp. This refers to those who for sickness have been excused beforehand from camp duty.

REPORTS.

The reports which the militia surgeon is required to make are few. The morning sick report is the principal one, and made each day, when in camp, immediately after sick call. The form on the next page, made out for two days on the same blank for the sake of explanation, will be sufficiently clear. Three copies are made, — one to be sent immediately to the adjutant for the information of the commanding officer, and one sent immediately to the medical director or surgeon of brigade from which the consolidated report is made, and one retained by the surgeon. This retained copy is made in a book furnished for the purpose, called the "Morning Sick Report Book," and consists of a number of blank reports bound together.

These reports are always signed by the senior medical officer present, who is responsible for their accuracy.

To *prove* the report, the sum of the figures in the first, second, and third columns, in the fourth and fifth, and in the sixth, seventh, eighth, ninth, tenth, and eleventh columns should all be the same.

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MORNING REPORT OF THE SURGEON OF A REGIMENT, POST, OR GARRISON.

DATE.	COMPANY.	Remaining at last report.		Taken sick.	Total.		Returned to duty.	Discharged.	Sent to Gen. Hospital.	Died.	Remaining.		REMARKS.
		In hospital.	In quarters.		In hospital.	In quarters.					In hospital.	In quarters.	
25 Oct. 1876 . .	A			3	0	3					0	3	
	B			4	1	3					1	3	
	C			6	2	4					2	4	
	D			2	0	2					0	2	
	K			1	0	1					0	1	
				16	3	13					3	13	

The consolidated morning sick report is made in the same manner, by brigade surgeons, from the reports of medical officers of the organizations forming the brigade; the name of the organization simply taking the place of the company.

A report or return is required in Massachusetts annually on the first day of December, from medical officers having medicines, hospital stores, or instruments in charge, and is sent direct to the surgeon-general. (See under *Requisitions*, p. 66.)

The militia law of Massachusetts, section 52, requires that "surgeons of brigades, regiments, battalions, or other organizations shall, after each tour of duty, and within ten days thereof, report to the surgeon-general, through proper channels, of all that pertains to their office which relates to said duty."

This report should be of a general character, describing cases of medical or surgical interest, any peculiarities of the weather, with an account of the general sanitary condition of the camp or march, and any suggestions whereby the condition of the service may be improved.

The adjutant-general of this State has decided that this report is to be sent through regimental and brigade headquarters to the adjutant-general, and by the latter officer forwarded to the surgeon-general.

RECORDS.

Army regulations require the senior medical officer of each hospital, post, regiment, or detachment to keep the following records: —

A register of patients.

A prescription book.

A diet book.

A case book.

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A meteorological register.

Copies of his requisitions, returns, and reports.

An order and letter book, in which will be transcribed all orders and letters relating to his duties.

Very few, if any, of the foregoing, are kept by militia surgeons, the shortness of the time in camp, and the different character of the service rendering many of them unnecessary.

The register and prescription book for field service are combined, as will be seen by the annexed form. This should be kept whenever in camp. The date will be placed in the same column as the names, each date being separated by a straight line (preferably in red ink) across both pages.

The diet and case books will rarely be needed in a five days' encampment, usually the maximum time for a militia camp.

Any case of peculiar interest the surgeon will of course enter in his own private records.

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REGISTER AND PRESCRIPTION BOOK OF Regiment / Battalion M. V. M.

No.	Name.	Rank.	Reg't.	Comp.	Disease.	In hospital or quarters.	Prescription and Remarks.
							In this register are entered all those that are *excused from* duty on the company sick books.

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THE METEOROLOGICAL REGISTER.

This is seldom kept in the militia; but as it is part of a surgeon's duty to keep such a record, the following directions for taking observations are given for those who care to know how to perform all the duties that belong to a surgeon.

This duty is frequently performed by the hospital steward, under the supervision of the surgeon.

The annexed form, modified and condensed from that used by the U. S. Signal Service for their weekly returns, is here offered (p. 54) as suitable for the use of the militia.

The meteorological observations of the militia surgeon may appear at the first glance, in view of the ample reports of the U. S. Signal Service, to be superfluous; this is not the case, however, because such observations taken by the surgeon of an organization, and tabulated for a series of years, serve as a most valuable guide to commanding officers who fix the time for their encampment. It will be readily admitted that these specific reports will attract more attention to the weather at certain seasons of the year from those interested than the continuous report of the Signal Service.

DIRECTIONS FOR TAKING METEOROLOGICAL OBSERVATIONS.

The instruments required are: — A barometer, two thermometers, a compass, a rain gauge, and measuring stick.

The barometers in use in the army are the siphon of Bunten, and the cistern of Green.

The thermometers must be equally sensitive. One of them is prepared as a hygrometer by drawing over the

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METEOROLOGICAL RECORD, for the encampment ending ———, 187–.

Day and Date of Observation.	Time of Observation.	Barometer.	Thermometer. Attached.	Thermometer. Exposed.	Corrected Barometer.	Hygrometer. Wet Bulb.	Relative Humidity.	Wind. Direction.	Wind. Force.	Lower Clouds. Kind.	Lower Clouds. Amount.	Upper Clouds. Kind.	Upper Clouds. Amount.	Upper Clouds. Direction moving from.	Rain or Snow. Commenced.	Rain or Snow. Ended.	Amount of Rain or Melted Snow.	Maximum and Minimum Thermometer.	Mean Av'ge. Barometer	Mean Av'ge. Thermometer.	Remarks. (State of Weather.)
Sunday, 7 a. m																					
2 p. m.																					
9 p. m.																					
Monday, 7 a. m.																					
2 p. m.																					
9 p. m.																					
Tuesday, 7 a. m.																					
2 p. m.																					
9 p. m.																					
Wed'day, 7 a. m.																					
2 p. m.																					
9 p. m.																					
Thursday, 7 a. m.																					
2 p. m.																					
9 p. m.																					
Friday, 7 a. m.																					
2 p. m.																					
9 p. m.																					
Saturday, 7 a. m.																					
2 p. m.																					
9 p. m.																					

No. and kind of Barometer used during week, ——. Station, ———. ——— ———,

Instrumental error . . . . . ——. Lat. and long. *Observer*

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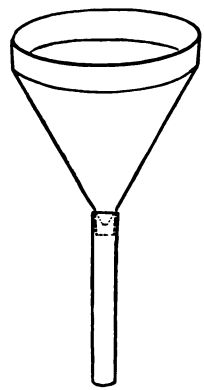
bulb one end of a piece of cylindrical lamp-wicking, and the other end then immersed in a small vessel of water.

The compass will be used to ascertain the direction of the wind.

The conical rain gauge is used in the army, but sufficiently accurate observations for practice can be taken by using any *flat* bottomed vessel, the sides of which are *perfectly* perpendicular, and measuring the amount of rain by a rule, on which the inches are given by tenths.

A conical rain gauge can be easily constructed by a tinsmith, and at a very small expense. The annexed diagram shows how it should be made.

DIAGRAM No. 6. *Rain Gauge.*



One inch in the tube will show one tenth inch of rain-fall.

Observations of the barometer, with its attached thermometer, of the thermometer (detached), and hygrometer or wet bulb, of the direction and force of the wind, and of the weather, are made at 7 A. M., 2 P. M., and 9 P. M.

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At every fall of rain, snow, hail, or sleet, the time of its commencement and end will be recorded, and the quantity which fell, as indicated by the rain gauge.

In all entries on the register, *fractions* will be expressed by *decimals*, carried out two points.

The thermometer and hygrometer should be placed in a situation having a free circulation of air, not exposed to the direct or reflected rays of the sun, and sheltered from rain.

In making observations, avoid breathing on or touching the instruments; and at night, manage the lamp so that a rise in the mercury is not caused by its heat.

In freezing weather, when the covering of the bulb of the hygrometer remains dry, it will be necessary to moisten it with cold water about fifteen or twenty minutes before the time for making the observation; the evaporation from the film of ice thus formed being slower than that from water. When this is done, the fact will be noted on the register.

The relative humidity will be found by reference to the tables on pages 57 and 58.

Find the temperature of the wet bulb thermometer in the left hand column, and the difference between this and the dry bulb in the horizontal line at the top, and the number at the intersection of these two columns will be the humidity sought.

For example:—

Suppose the dry bulb to read . .	75°
and the wet bulb	63°
The difference is	12°

Find 63, or the number nearest it in the left hand column of Table 2. In this case it is 65. Then in the horizontal line at the top find 12, which is the difference; at the intersection of these columns will be found the humidity sought, in this example 49 per cent.

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No. 1.— RELATIVE HUMIDITY.

FROM +9° TO —31°; BULB COVERED WITH A FILM OF ICE.

Temperature Fahrenheit. — Relative humidity in hundredths.

Wet-bulb thermometer. Fahrenheit.	0°.0	0°.5	1°.0	1°.5	2°.0	2°.5
	Relative humidity.	Relative humidity.	Relative humidity.	Relative humidity.	Relative humidity	Relative humidity.
°						
—31	100	36.0				
—30	100	39.6				
—29	100	42.9				
—28	100	46.1				
—27	100	49.0				
—26	100	51.8				
—25	100	54.4				
—24	100	56.8				
—23	100	59.0				
—22	100	61.0				
—21	100	62.6	26.9			
—20	100	64.2	30.3			
—19	100	65.9	33.5			
—18	100	67.5	36.6			
—17	100	69.0	39.5			
—16	100	70.4	42.3			
—15	100	71.8	44.9	19.4		
—14	100	73.0	47.4	23.0		
—13	100	74.3	49.8	26.4		
—12	100	75.4	51.9	29.5		
—11	100	76.5	53.9	32.5		
—10	100	77.5	55.7	35.3	15.6	
— 9	100	78.5	55.7	38.3	19.1	
— 8	100	79.4	59.4	40.6	22.5	
— 7	100	80.3	61.1	43.0	25.7	
— 6	100	81.1	62.7	45.4	28.4	12 9
— 5	100	81.8	64.5	47.6	31.7	16.4
— 4	100	82.5	65.8	49.8	34.5	19.8
— 3	100	83.2	67.1	51.7	36.9	22.8
— 2	100	83.9	68.3	53.5	39.3	25.8
— 1	100	84.5	69.5	55.3	41.6	28.6
0	100	85.0	71.7	57.0	43.8	31.3
1	100	85.6	71.8	58.6	46.0	33.9
2	100	86.2	73.0	60.2	48.0	36.4
3	100	86.7	74.0	61.8	50.0	38.8
4	100	87.2	75.0	63.3	52.0	41.2
5	100	87.7	76.0	64.7	53.8	43.4
6	100	88.2	76.9	66.0	55.3	45.2
7	100	88.6	77.7	67.1	56.8	47.0
8	100	89.0	78.4	68.2	58.2	48.8
9	100	89.4	79.1	69.2	59.6	50.5

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WET-BULB THERMOMETER.

No. 2.—RELATIVE HUMIDITY.

Difference between Wet and Dry Bulb Thermometers.

+10° to +100°.

°	1°	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
10	79	61	44	28	13																				
15	83	67	52	39	27	15	5																		
20	85	72	60	48	38	28	19	11																	
25	88	77	67	59	48	41	32	26	18	10															
30	89	79	69	61	52	45	37	30	26	18	11	6													
35	90	80	71	63	56	48	42	35	30	24	19	14	10	6											
40	91	83	75	67	60	54	48	42	37	32	27	23	19	14	12										
45	92	85	77	71	64	59	53	48	43	38	34	30	26	23	19	16	13	10							
50	93	86	79	73	68	62	57	53	48	44	40	36	33	29	26	23	20	18	15	13	11				
55	93	87	81	76	70	66	61	57	52	48	45	41	38	35	32	29	26	24	20	19	17	15	13	11	9
60	94	88	83	78	73	68	64	60	56	52	49	45	42	39	36	34	31	29	26	24	22	20	18	17	15
65	94	90	84	79	75	71	67	63	59	56	52	49	46	43	40	38	35	33	31	29	27	25	23	21	20
70	95	90	85	81	76	72	69	65	61	58	55	52	49	46	44	41	40	37	35	32	31	29	27	26	24
75	95	90	86	82	78	74	70	67	64	61	58	55	52	49	47	45	42	40	38	36	34	32	30	29	27
80	95	91	87	83	79	75	72	69	66	63	60	57	54	52	49	47	45	43	41	39	37	35	34	32	30
85	96	91	88	84	80	76	73	70	67	64	62	59	56	54	52	50	47	45	43	41	40	38	36	35	33
90	96	92	88	85	81	78	75	72	69	66	63	61	58	56	54	52	49	47	46	44	42	40	39	37	36
95	96	92	89	85	82	79	76	73	70	68	65	62	60	58	56	53	51	49	48	46	44	42	41	39	38
100	96	93	89	86	83	80	77	74	71	69	66	64	62	59	57	55	53	51	50	48	46	44	43	41	40

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The direction and estimated force of the wind will be registered together.

The direction of the wind can be easily ascertained, if a vane is not at hand, by watching the direction the clouds are moving, the flag is flying, or by fastening a string to an upright stick and noting which way it is blown.

The direction will be expressed, as is customary, by the letters which denote the points of the compass, as W., S. W., etc. The force of the wind will be expressed by figures from 0 to 10, thus: —

0, will signify a calm.
1, a barely perceptible breeze.
2, a gentle breeze.
3, a moderate breeze.
4, a brisk breeze.
5, a strong wind.
6, a very strong wind.
7, a storm.
8, a great storm.
9, a hurricane.
10, a violent hurricane.

For example, should the wind blow a brisk breeze from the southwest, the entry in the register would be, S. W. 4.

Observations on the weather will be recorded thus: —

Cd. will signify cloudy.
C., clear.
F., fair.
Fg., fog.
R., rain.
S., snow.
T., threatening.

The upper clouds are, —
Cirrus or feathery clouds.
Cirro-stratus or mackerel-back clouds.
Cirro-cumulus or woolly clouds.
Cumulus or mountain clouds.

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The lower clouds are,—

Stratus or sheet cloud.

Cumulo-stratus, such as are usually seen before thunder-storms.

Nimbus or rain cloud.

The rain gauge will be kept remote from all elevated structures, at a distance equal to or greater than their height.

Snow or sleet must be melted over the fire, and covered to prevent evaporation, before being measured.

Under the head of remarks will be noted thunder-storms, near or distant; silent lightning, with its direction and elevation above the horizon; falls of hail, snow, and sleet; fogs; white or hoar frost, etc., and all remarkable phenomena.

At the nine o'clock observation the heavens should be examined as to whether there are any aurora or shooting stars; and especially about the 10th of August and 12th and 13th of November see if there are any great number of luminous meteors visible, stating the number observed in an hour, or at least in a quarter of an hour. In case of great fires occurring in clear, calm, dry weather, with a high dew point, observe whether clouds form over the fire, and describe the phenomena.

COPIES, ETC.

Copies of *requisitions*, *reports*, and *returns* should be kept carefully on file.

The *order and letter book* is to retain copies, not merely of all letters and reports received, but of all sent by the surgeon on official business. Copies of indorsements are made in this book. Some surgeons have three books, one for orders and letters received, one for letters sent, and one for indorsements.

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In Massachusetts it is allowed by general orders from the adjutant-general's office to keep orders, etc., in an adhesive file instead of making copies.

Surgeons are furnished with a morning sick report book, in which a copy of the morning sick report is made before the original is sent to the adjutant's office.

REQUISITIONS.

Medicines, instruments, dressings, hospital stores, and bedding (for hospital use) are furnished by the medical purveyor or officer acting as such, upon a requisition, made out in duplicate by the senior surgeon of a regiment or separate command, and one copy sent direct to the medical director, who forwards it with his approval or disapproval, or modification, indorsed thereon to the next higher medical authority. In cases where there is no medical director they are sent direct. The other copy is retained. In the army, two copies are required to be sent forward, and by different mails.

Requisitions for articles belonging to the quartermaster's department must be forwarded to the commanding officer (through the adjutant) for his indorsement.

The commanding officer, if he sees fit, may order that requisitions for medical supplies be transmitted through the same channels as official correspondence, in which case he would indorse his approval or disapproval before sending the requisition to the medical director.

Supplies in the army are required to be made according to the standard supply table; and if the article is not in accordance with that table, the reason therefor must be set forth on the requisition.

The supply table of Massachusetts will be found at length in the appendix.

In all official lists of medical supplies, the nomencla-

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ture, order, and classification of the standard supply table should be strictly followed. The whole table need not be transcribed in all instances, but the names of the articles mentioned must follow the official arrangement.

The surgeon-general or chief medical officer of a State, generally acts as medical purveyor to its militia.

Requisitions are made upon blanks of the following form: —

REQUISITION FOR MEDICAL AND HOSPITAL SUPPLIES.

Station ——; *Period* ——.

From —— *to* ——.

Command: Officers, ——; *Enlisted Men,* ——; *all others entitled to Medicines,* ——; *Total,* ——.

Articles, and characters or quantities.	On hand.	Wanted.	Articles, and characters or quantities.	On hand.	Wanted.
Acacia . . . . . lb.			(INDORSEMENT.)		
Acid, acetic . . . . . lb.					
Aloes, extract . . . . oz.			Requisition for medical supplies required by —— at ——.		
			——, 18—.		

Date, ——. ——— ———,

Surgeon.

N. B. — Requisitions will exhibit the quantity of each and every article "on hand," whether more are wanted or not. They will be transmitted in duplicate, and by different mails.

When it is necessary to obtain medical supplies, in an emergency which will not admit of application to a medical purveyor, or medical director, they may be purchased and paid for by the medical officer, and bills in duplicate for his reimbursement (Form 1), be forwarded through the medical director to the surgeon-general for examina-

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tion and payment. The purchasing officer shall prepare, in triplicate, an invoice of the articles bought (Form 2); one copy to be forwarded to the surgeon-general with the bills; one, a voucher, is to accompany his next property return, on which he shall account for the articles purchased; and one to be filed with his retained set of vouchers. *Medical officers will exercise great care to avoid, by proper requisitions, the necessity for making direct purchases.*

(FORM 1.)

The State of ——— *To* ——— *Dr.*

For reimbursement for moneys expended by him, as follows: —

Place and Date.	Articles and Quantities.	Dollars.	Cents.
	(INDORSEMENT.) FORM 1. Account for medicines purchased and paid for by ———, at ———, on the ——— day of ———, 187–.		

I certify that the above account is correct and just; that I purchased and paid for the articles above charged, as shown by the appended receipted bill, and that such purchase was necessary because ———.

——— ———,
Surgeon.

Station, ———.

Date, ———.

NOTE. — The original bill for the articles must be appended to this form as a voucher. In the receipt to the original bill must be stated the place, date, amount received, and name of the officer from whom received, in full.

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(FORM 2.)

Invoice of Medical Supplies purchased this day by ——— for use at ——— as per bill for reimbursement — to be taken up and accounted for on his next Medical and Hospital Property Return.

Place and Date.	Articles.	Quantity.
	(INDORSEMENT.) FORM 2. Invoice of medical supplies purchased by ——— on the ——— day of ———, 187–, at ———.	

I certify that the above invoice is correct.

——— ———,

Station, ———. *Surgeon.*

Date, ———.

All officers in transferring or issuing medical supplies will prepare invoices in triplicate (Form 3), two of which are to be given to the receiving officer and one sent immediately to the surgeon-general, unless he be the issuing officer, in which case he retains it. The receiving officer will prepare receipts in triplicate (Form 4), two of which are to be given to the issuing officer, with a report of the quality and condition of the articles, and one sent immediately to the surgeon-general accompanied by a copy of the report, unless the issuing officer and surgeon-general are the same. When supplies are turned over to a quartermaster for storage or transportation, a duplicate of

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the quartermaster's receipt for the packages will be forwarded to the surgeon-general with the invoice.

(FORM 3.)

Invoice of Medicines, Hospital Stores, Bedding, etc., contained in Packages issued to ———.

Articles.	Quantity.	Articles.	Quantity.
		(INDORSEMENT.) FORM 3. Invoice of hospital supplies issued by ———, 187–, ——— to ———, at ———.	

I certify that the preceding invoice is correct.

——— ———,

Station, ———. *Surgeon.*

Date, ———.

Triplicates.

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(FORM 4.)

Receipt for Medicines, Hospital Stores, Bedding, etc., contained in ——— Packages issued by ———.

Articles.	Quantity.	Articles.	Quantity.
		(INDORSEMENT.) FORM 4. Receipt for hospital supplies received by ———, 187–, from ———.	

I certify that I have received the articles enumerated above.

———— ————,

Station, ———. *Surgeon.*

Date, ———.

Triplicates.

The senior medical officer of each command, having made and forwarded his requisition, as previously described, receives in due time from the medical purveyor the articles required. They are generally furnished in a small medicine chest, or field companion, and should be kept at the headquarters of the command, under the charge of the surgeon, so that whatever the emergency which calls out the militia, medicines for immediate use will be on hand.

The surgeon will make annually, on the first day of December, a return of medical property, as to the quantity, condition, etc., *direct* to the surgeon-general, according to the annexed form.

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RETURN OF MEDICAL AND HOSPITAL PROPERTY.

Articles, and characters or quantities.	On hand at last return.	Received since last return.	Total.	Expended with the sick.	Issued.	Lost or destroyed by unavoidable accident.	Worn out, or unfit for use.	Total expended, etc.	On hand.	Remarks.
Acacia, powdered . . . . . oz.	32	56	88	56	..	16	..	72	16	Bottle upset.
Acid, citric . . . . . oz.	8	16	24	8	..	..	16	32	32	Condemned and ordered to be dropped. See inclosed report.
Acid, muriatic . . . . . oz.	40	40	80	16	16	24	..	56	24	Bottle broken; acid lost.

I certify that the above return is correct, to the best of my knowledge, and that the medicines, dressings, and stores have been expended only in accordance with regulations.

——— ———,

Station, ———. *Surgeon.*

———, 187–.

N. B. — Articles "Lost or destroyed by unavoidable accident" must be accounted for by a certificate from the medical officer setting forth fully the circumstances under which such loss or destruction occurred; and this should be accompanied by statements of non-interested parties as evidence in the case. Such certificates and statements must be forwarded through the medical director for remark. No article can be returned as "Worn out and unfit for use," until after inspection and condemnation by a duly authorized officer.

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This report is made in the army in triplicate, in the militia in duplicate. The original is sent with a complete set of vouchers, or invoices.

The duplicate is to be retained, and with it a complete set of vouchers, exact duplicates of those sent with the original.

The third copy required in the army is forwarded direct but without vouchers, and by a different mail.

SANITARY DUTIES AND SUGGESTIONS.

The medical officer is charged with the entire sanitary care of his corps; he is not as in civil life to confine himself to visiting the sick, but his care extends to the well that they may remain so, and thereby add to the effectiveness of the troops. He should look after all matters pertaining to the health and cleanliness of the soldiers and camp, and make oral or written suggestions to the commanding officer for the correction of any sanitary errors he may notice. He, however, is not *responsible* for the cleanliness of the camp, that responsibility resting upon the officer of the day.

In selecting the site for a camp, the medical officer should be consulted, and unless uncontrollable strategic reasons compel, low moist ground as well as the vicinity of marshes, particularly the side opposite the prevailing winds, should be avoided.

Attention should be paid to the water and wood supply, opportunities for drainage, and, if possible, there should be good roads leading to the camp for the benefit of teams bringing quartermasters' and sutlers' supplies.

A spade should be sunk a foot or more to ascertain whether the ground is sufficiently drained, before the men are allowed to sleep upon it.

A small trench should be dug around each tent, a

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conduit for the rain to prevent its spreading over the ground under the tent.

This need not be done if wooden tent floors are used, as is customary in many militia organizations. These floors should be raised at least two inches from the ground. If trenching around the tents is prohibited, as in Massachusetts upon the State camp ground, and floors are not to be had, a rubber blanket should be placed upon the ground before the men lie down to sleep or rest. If neither floors nor blankets are on hand, plenty of fresh dry straw should be used.

The health of troops depends in great measure upon good air and ventilation; pure water; good, sufficient, and well cooked food; cleanliness, and proper clothing.

Air and Ventilation. — It may seem unnecessary to speak of the necessity of good air and ventilation to those who are living in the field, but it should be remembered that when the sides of a tent are pinned down there can be little if any chance for the circulation of air, and when occupied by several persons the air soon becomes foul. To obviate this the sides should be looped up each morning in dry weather, and once in five days the tents should be struck. Straw, if used for bedding, blanket and extra clothing should be thoroughly aired and sunned every day if practicable. When an organization can afford the expense in addition to tent floors, it should own mattresses or bedsacks to fill with straw. Each morning these should be carried from the tents to a place of storage, to be returned at night. The passage back and forth will insure their being aired.

Water. — Care should be taken that the water for drinking or culinary purposes does not become polluted, as may happen when wells are sunk in a sandy soil, if the men are allowed to contaminate the ground around

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them by pouring upon it soap suds or the refuse of the kitchens. Washing at or near wells should be prohibited; the water should be carried to the company streets and used there. Should a stream pass the site of a camp, and its water be fit to be made use of, the upper part should be set apart for culinary and drinking purposes; the next for watering horses and cattle; the lowest for washing. If water is or becomes impure, and none better is to be had, it should be purified before the men are allowed to drink it. One of the simplest methods of doing this is to boil the water with charcoal, which can always be obtained. Boiling, besides ridding water of certain impurities, drives off the gases in solution, and renders the water so flat that the men will not use it, until by agitation and exposure it has been rendered fit for use by the absorbtion of oxygen.

Alum has been used for a long time to purify water from suspended matters. It does this very effectually if there be calcium carbonate in the water; calcium sulphate is formed, and this and a bulky aluminium hydrate entangle the floating particles and sink to the bottom. The quantity of crystallized alum to be used is about six grains per gallon.

Food. — Rations are not issued to the militia unless called into active service, in which case they fare the same as regular troops.

The occasions when it becomes necessary to provide subsistence for the militia are at parades of a day or at the annual encampments. The quantity and quality of food provided at such times varies according to the financial ability of the organization. The food should at all times, however, be simple and wholesome.

Cleanliness. — The time spent in camp is so short that the surgeon will hardly be called upon to attend any dis-

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eases due to a neglect of personal cleanliness, but vermin may be brought into camp and in an incredibly short time attack every member of a company.

Lice and bed-bugs may be exterminated from clothing by a thorough fumigation with sulphur.

The sinks in use at the State camp ground in Massachusetts in 1876 seem to meet every requirement. The trenches are dug as follows: —

For regiments, two, one in each wing, 6 feet deep, 3 feet wide at bottom, 2 feet wide at top, and 30 feet long.

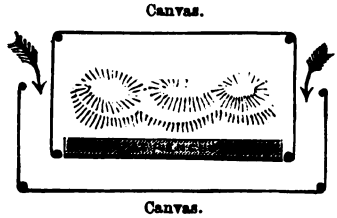
For battalions of six companies, two similar ones, one in each wing, 20 feet long.

For smaller battalions or a company, one trench of same depth and width, 20 feet long.

Nine inches of clean earth should daily be thrown into the sinks, — about three inches morning, noon, and night.

The sink covers are so arranged that there is only space enough for the passage of two men between the trench and cover.

The covers or screens are made by stretching canvas around the trenches, as represented in the diagram.



The earth removed from the trenches is placed on their rear side, and is used in covering them over.

When the trenches or sinks are filled to within three feet of the surface a layer of charcoal, copperas, chloride

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of lime, or other disinfectant, should be thrown in and the trench filled up entirely with earth, and a new trench dug.

At the close of an encampment the trenches should be filled up with earth, disinfectants having been first thrown in as just described.

Offal should be buried in the ground, and not allowed to decompose in the sun; it is better, however, to put it into water-tight barrels, and give it daily to the farmers in the vicinity of the camp, who will gladly draw it away to give to their swine.

Clothing. — The medical officer should make timely suggestions to the commanding officer that the proper amount of clothing is worn, that overcoats are put on when the weather is such as to require them, that after exercise clothing is not imprudently thrown off, that wet clothing is exchanged for dry as soon as possible.

It is better to march in a light rain in warm weather without overcoats, for if worn, besides wetting the overcoats, the under clothing and uniform coat will in all probability be wet through with perspiration.

Inasmuch as the uniform is prescribed by regulation or custom, the surgeon has little opportunity to say whether it meets the requirements necessary for health; but as many of the militia organizations are allowed to wear such uniform as they may vote to adopt, the surgeon should, if he has the opportunity, exert his influence to prevent the adoption of a tight fitting and cumbersome dress, remembering that the first necessity of all clothing is warmth and next to that lightness.

The hat being usually the cheapest part of the uniform is the most likely to be changed; it should therefore be remembered that a small sized and close fitting hat or cap by preventing all circulation, and keeping a heated

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cloth in contact with the head, greatly predisposes to sunstroke, the principal service of the militia being performed during the hot summer months when exposure to the sun's rays may prove fatal.

The head covering should be of sufficient height to allow of an air space above the head of at least two inches; two or more holes should be made in the sides for the circulation of air; moreover, the top should never be glazed, the smooth surface preventing the radiation of heat. The visor should turn down.

HOSPITAL STEWARD.

The duties of this officer unite those of an apothecary, nurse, and clerk. As the first, he has charge of and dispenses the medicines; as the second, he attends to the sick, sees that they have the food and medicine which have been ordered for them, unless nurses have been specially detailed, in which case he acts as head nurse or ward master; as the third, he keeps the records, makes out most of the returns for the surgeon, the latter seeing that they are correct before adding his signature, and performs such clerical work as the surgeon may require.

The manner of performing the strictly military duties of the steward will be found given in the foregoing pages under the different headings, etc.

The duties of the hospital steward when in a hospital, the forms, returns, etc., required, will be found fully described in "The Hospital Steward's Manual," by J. J. Woodward, M. D., U. S. army.

The hospital steward is enlisted by the commanding officer and may be required to pass an examination as to his competency for the position.

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APPENDIX.

APPOINTMENT AND RANK.

MEDICAL officers are appointed in the different States as follows: —

By commanding officers — in Alabama, Colorado, California, Connecticut, Florida, Georgia, Indiana, Kansas, Kentucky, Maine, Massachusetts, New Hampshire, New Jersey, New York,[1] North Carolina, Ohio,[2] Oregon, Pennsylvania, Rhode Island, Tennessee, Virginia, West Virginia.

By the governor of the State — in Arkansas, Louisiana, Maryland, Minnesota, Nebraska, South Carolina, Texas.

By the governor of the State with the consent of the senate — in Illinois, Mississippi.

By field officers — in Vermont.

Medical officers are elected — in Delaware; Ohio, in certain organizations.

The following list will show in which States a surgeon-general is allowed by law, and also his rank.

Brigadier-General. —Connecticut, New York, Massachusetts, Minnesota, Mississippi.

Allowed in case of insurrection, invasion, etc. — Ohio, Virginia,[3] Kentucky.

Colonel. — California, Kansas, Oregon, Rhode Island.[4]

Lieutenant-Colonel. — Georgia.

The law allows a surgeon-general to be appointed in case of insurrection, rebellion, etc., but does not specify his rank — in Pennsylvania and South Carolina.

The States not included in the foregoing make no provision by law for a surgeon-general.

[1] Must be recommended by surgeon-general.

[2] Medical officers are elected in some organizations.

[3] The rank is *brevet* brigadier-general.

[4] Is elected by general assembly in grand committee.

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In only two of the States does the law specially allow assistant surgeon-generals, namely, in Mississippi, where the rank is that of major, and in Rhode Island, where the rank is that of captain.

In many of the States they are appointed under a provision of the law which allows the governor to have, besides the adjutant-general, quartermaster-general, surgeon-general, etc., such additional officers of the general staff as the public service may require, with such rank as the commander-in-chief may designate.

In States where no surgeon-general is allowed by law, the same provision would permit one to be appointed.

The rank of medical officers is not specified in the laws of the following States: Colorado, Kansas, Louisiana, Maryland, Michigan, New Hampshire, New Jersey, North Carolina, Pennsylvania, below brigade staff, West Virginia.

In the following States the rank is not specified, but the law requires the militia to be organized and officered like the U. S. army: Arkansas, Delaware, Iowa, Kentucky, Nebraska, Ohio, Oregon, Rhode Island, South Carolina.

The militia laws of Missouri, Texas, and Wisconsin make no mention of any medical officers.

The rank of medical officers on a general's staff is specified as follows: —

MAJOR-GENERAL'S STAFF.

Colonel. — New York, Massachusetts.

Lieutenant-Colonel. — California, Florida, Indiana, Oregon, Pennsylvania.

Major. — Rhode Island, Georgia.

BRIGADIER-GENERAL'S STAFF.

Lieutenant-Colonel. — Massachusetts.

Major. — California, Florida, Indiana,[1] New York, Oregon, Pennsylvania.

Captain. — Rhode Island.

Regimental or battalion medical officers have their rank specified by law as follows: —

[1] In this State a brigadier-general may also appoint "four staff surgeons (sergeants) who act as assistants in the office and duties of his staff." Also, a major of a battalion may appoint an assistant surgeon with the rank of *first lieutenant;* a colonel, a surgeon with the rank of *lieutenant.*

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SURGEONS.

Major. — Connecticut, Massachusetts, New York, Virginia.

Captain. — Tennessee (captain of infantry).

First Lieutenant. — California, North Carolina (in cavalry), Florida.

Lieutenant. — Indiana, Georgia.

ASSISTANT SURGEONS.

Captain. — New York, Virginia.

First Lieutenant. — Indiana, California, Massachusetts.

Lieutenant. — Connecticut.

The old title of "surgeon's mate" is retained in the laws of New Hampshire, Ohio, West Virginia and North Carolina; in the latter State, in the cavalry the rank is that of a second lieutenant.

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UNIFORM.

THE uniform worn by the medical officer of the U. S. army is as follows: —

Full-dress Coat. — Double-breasted frock-coat of dark blue cloth, the skirt to extend from one half to three fourths the distance from the hip joint to the bend of the knee.

For an officer with the rank of brigadier-general: Two rows of buttons on the breast, eight in each row, placed by pairs; stand-up collar, not less than one, nor more than two inches in height, to hook in front at the bottom, and slope thence up and backward at an angle of thirty degrees on each side, corners rounded; cuffs three inches deep, to go around the sleeves parallel with the lower edge, and with three small buttons at the under seam; pockets in the folds of the skirts, with two buttons at the hip and one at the lower edge of each side-edge, making four buttons on the back and skirt of the coat; collar and cuffs to be of dark blue velvet; lining of the coat black.

For an officer with the rank of colonel, lieutenant-colonel, or major: The same as the foregoing, except there will be nine buttons in each row, on the breast, placed at equal distances; collars and cuffs of the same color and material as the coat. The upper half of the cuffs to be ornamented with three double stripes of gold braid running the length of the cuffs, pointed at their upper ends, and with a small button below the point of each stripe. The braid to be one fourth inch wide, the double stripes to be one fourth inch apart, the two parts of each stripe to be one eighth inch apart. For an officer below the rank of major: The same as for an officer of the rank of colonel, except that there will be seven buttons in each row on the breast, and two stripes on the cuffs.

This coat is worn on all dress occasions, such as reviews, inspections, dress parades, courts-martial, etc.

Undress Coat. — A sack-coat of dark blue cloth or serge; falling collar; single breasted, with five buttons in front, same as those worn on dress-coat; the skirt to extend from one third to two thirds the distance from the hip joint to the bend of the knee.

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The shoulder-strap is always worn with this coat, which is for fatigues, marches, and ordinary wear.

Buttons. — The regular army button for officers (the militia should use the button of their respective states).

Trousers. — Dark blue cloth, plain, without stripe, welt, or cord.

Cravats. — Black; the tie not to be visible at the opening of the collar.

Boots and Shoes. — Of black leather and to come above the ankle.

Hat (full dress). — Chapeau, with two black ostrich feathers.

Forage Cap. — For an officer of the rank of brigadier-general, of dark blue cloth, chasseur pattern, with black velvet band, and a badge in front, consisting of a gold embroidered wreath on dark blue ground, encircling the letters U. S., in silver Old English characters. (The militia should have the initial letters "M. V. M." for Massachusetts Volunteer Militia, "C. N. G." for Connecticut National Guard, or "R. N. G.," etc., as the case may be, instead of "U. S.") For officers of less rank than brigadier-general same as above, omitting the black velvet band.

Fatigue Hat. — Of black felt, to be worn only on fatigue duty and on marches and campaigns.

Spurs. — Yellow metal or gilt.

Gloves. — Buff or white gauntlets or gloves.

Sash. — Is worn only by an officer of the rank of brigadier-general. Buff silk net, with silk bullion fringe ends; sash to go twice around the waist and to tie behind the left hip, pendant part not to extend more than eighteen inches below the tie.

Sword-belt. — A waist belt, not less than one and one half nor more than two inches wide, with slings of the same material as the belt, with a hook attached to the belt on which to hang the sword.

The belt to be worn outside the full-dress coat and undress sack.

For officers of rank of brigadier-general: Of red Russia leather, with three stripes of gold embroidery.

For officers of rank of field officers: One broad stripe of gold lace on black enameled leather.

For officers below rank of field officers: Four stripes of gold, interwoven with black silk, lined with black enamelled leather.

On undress duty, marches, and campaigns, officers may wear a plain black leather belt.

Sword Belt-plate. — Gilt, rectangular, two inches wide, with a raised bright rim; a silver wreath of laurel encircling the "Arms

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of the United States;" eagle, shield, scroll, edge of cloud and rays bright. The motto "E pluribus unum" upon the scroll; stars also of silver.

Sword. — Small sword and scabbard.

[Known as medical department sword.]

The sword and sword-belt are worn upon all occasions of duty except fatigue.

Sword Knot. — Rank of brigadier-general: Gold cord, with acorn end. All other officers: Gold lace strap, with gold bullion tassel.

Epaulette. — Worn only by officers with rank of brigadier-general: Of gold with solid crescent: device, one silver embroidered star, with five rays one and one half inches in diameter.

Shoulder-knots. — Of gold cord, Russian pattern, on dark blue cloth ground; insignia of rank and lettters M. D. in Old English embroidered in silver on the cloth ground.

The insignia of rank on the knots are the same as for the shoulder-straps.

Shoulder-straps. — Dark blue cloth, one and three eighths inches wide by four inches long, bordered with an embroidery of gold one fourth of an inch wide.

For officer of rank of brigadier-general: In the centre one silver embroidered star of five rays.

For rank of colonel: In the centre a silver embroidered spread eagle, two inches between the tips of the wings, having in the right talon an olive branch, and in the left a bundle of arrows; an escutcheon on the breast, as represented in the "Arms of the United States.

For rank of lieutenant-colonel: A silver embroidered leaf at each end, each leaf extending seven eighths of an inch from the end border of strap.

For rank of major: The same as foregoing except that the leaf is embroidered in gold instead of silver.

For rank of captain: At each end two silver embroidered bars of the same width as the border, placed parallel to the ends of the strap, at a distance between them and from the border equal to the width of the border.

For rank of first lieutentant: The same as captain, omitting the bar at each end nearest the centre.

For rank of second lieutenant: The simple strap without insignia.

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Overcoat. — Rank of brigadier-general: Of dark blue cloth, closing by means of four frog buttons of black silk and loops of black silk cord; cord down the breast, and at the throat by a long loop "a echelle," without tassel or plate, on the left side, and a black silk frog button on the right; cord for loops $\frac{15}{100}$ of an inch in diameter; back, a single piece, slit up from the bottom from 15 to 16 inches, according to the height of the wearer, and closing at will by buttons and button-holes cut in a concealed flap; collar of the same color and material as the coat, rounded at the edges, and to stand or fall; when standing to be about five inches high; sleeves loose, of a single piece and round at the bottom, without cuff or slit; lining woolen; around the front and lower borders, the edges of the pockets, the edges of the sleeves, collar, and slit in the back, a flat braid of black silk one half inch wide; and around each frog button on the breast a knot two and one quarter inches in diameter, of black silk cord $\frac{7}{100}$ of an inch in diameter; cape of the same color and material as the coat, removable at the pleasure of the wearer, and reaching to the cuff of the coat sleeve when the arm is extended; coat to extend down the leg from six to eight inches below the knee, according to height.

To indicate rank: There will be on both sleeves, near the lower edge, a knot of flat black silk braid, not exceeding one-eighth of an inch in width, and composed of five braids, double knot.

For all other officers: Dark blue close fitting double-breasted surtout coat, with a cape, made to detach from the coat and fall to the tips of the fingers when the arm and hand are extended; the skirt of the coat for mounted officers to reach half way between the knee and the sole of the foot; for dismounted officers, three inches below the knee.

The coat to have seven buttons on each breast of the same pattern as those on the uniform coat. The insignia of rank on the sleeve, as follows, viz: —

Colonel, five braids, single knot; lieutenant-colonel, four braids, single knot; major, three braids, single knot; captain, two braids, single knot; first lieutenant, one braid, single knot; second lieutenant, without braid.

Horse Furniture. — Saddle cloth of dark blue cloth, of sufficient length to cover the saddle and holsters, and one foot ten inches in depth, with an edging of gold lace one inch wide.

Hospital Steward. — The uniform of the hospital steward differs from that of a non-commissioned officer only as follows: —

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The facings of the coat are of emerald green.

Caduceus.

The trousers have a cloth stripe of emerald green, one inch and one quarter wide.

A half chevron of emerald green cloth, one and three-fourths inches wide, piped with yellow cloth, running obliquely downward from the outer to the inner seam of the sleeve, and at an angle of about thirty degrees with a horizontal, and in the centre a "caduceus" two inches long, the head towards the outer seam of the sleeve.

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MEMORANDUM

For the information of persons desirous of entering the Medical Corps of the U. S. Army.

EXTRACT FROM LAWS OF THE UNITED STATES.)

ACT OF CONGRESS, *Approved June* 30, 1834 : —

"SEC. 1. *Be it enacted, etc.*, That from and after the passage of this act, no person shall receive the appointment of assistant surgeon in the army of the United States, unless he shall have been examined and approved by an army medical board, to consist of not less than three surgeons or assistant surgeons, who shall be designated for that purpose by the Secretary of War, and no person shall receive the appointment of surgeon in the army of the United States unless he shall have served at least five years as an assistant surgeon, and unless, also, he shall have been examined by an army medical board constituted as aforesaid."

ACTS OF CONGRESS, *Approved June* 23, 1874, and *June* 26, 1876 : —

"SEC. 4. That the medical department of the army shall hereafter consist of one surgeon-general, ... one assistant surgeon-general, ... one chief medical purveyor, four surgeons, with the rank, pay, and emoluments of colonels, two assistant medical purveyors, ... eight surgeons, with the rank, pay, and emoluments of lieutenant-colonels, fifty surgeons, with the rank, pay, and emoluments of majors, one hundred and twenty-five assistant surgeons, with the rank, pay, and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay, and emoluments of captains of cavalry after five years' service."

All candidates for appointment in the medical corps must apply to the Hon. Secretary of War for an invitation to appear before the medical examining board. The application must be in the handwriting of the candidate, stating age and birthplace, and be accompanied by testimonials from professors of the college in which he graduated, or from other physicians in good repute.

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Candidates must be between twenty-one and twenty-eight years of age, and graduates of a medical college, having a thorough and complete course of medical education — evidence of which must be submitted to the board before examination.

The morals, habits, physical and mental qualifications and general aptitude for the service of each candidate will be subjects for careful examination by the board, and a favorable report will not be made in any case in which there is a reasonable doubt.

The following will be the general plan of the examination : —

I. A short essay, either autobiographical or upon some professional subject — to be indicated by the board.

II. Physical examination. This will be rigid, and each candidate will in addition be required to certify "*That he labors under no mental or physical infirmity, nor disability of any kind, which can in any way interfere with the most efficient discharge of his duties in any climate.*"

III. Oral examination on subjects of preliminary education, general literature and general science. The candidate must satisfy the board in this examination that he possesses a thorough knowledge of the branches taught in the primary schools, and a failure to show this will end his examination.

Oral examination on scientific subjects will include Chemistry and Natural Philosophy ; and that on literary subjects will include English Literature, History of the United States, and General History — Ancient and Modern. Candidates possessing a knowledge of the higher mathematics, the ancient and modern languages, will be examined therein, and due credit given for a proficiency in any or all of these subjects.

IV. Written examination on anatomy, physiology, surgery, practice of medicine and general pathology, obstetrics, and diseases of women and children. Oral examination on these subjects, and also on medical jurisprudence, materia medica, therapeutics, pharmacy, toxicology and hygiene. Few candidates pay the attention to hygiene which it deserves ; it is made an important subject in this examination.

V. Clinical examination, medical and surgical, at a hospital.

VI. Performance of surgical operations on the cadaver.

The board will deviate from this general plan whenever necessary, in such manner as they deem best to secure the interests of the service.

The board will report the merits of the candidates on the several

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branches of the examination, and their relative merit in the whole, according to which the approved candidates will receive appointments to existing vacancies, or to vacancies which may occur within two years thereafter.

An applicant failing one examination, may be allowed a second after one year, but not a third.

No allowance will be made for the expenses of persons undergoing examination, as this is an indispensable prerequisite to appointment, but those who are approved and receive appointments will be entitled to transportation on obeying their first order.

J. D. CAMERON,
Secretary of War.

WAR DEPARTMENT, *October* 31, 1876.

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LIST OF REPORTS AND RETURNS

REQUIRED FROM

MEDICAL OFFICERS OF THE U. S. ARMY.

PREPARED FROM OFFICIAL SOURCES AND PUBLISHED BY PERMISSION OF THE SURGEON GENERAL OF THE ARMY.

MONTHLY REPORTS.

1. REPORT of Sick and Wounded in duplicate: one copy to the surgeon-general, and one to the medical director. (See Circular Orders, No. 11, Surgeon-General's Office, November 4, 1867.)

2. Statement of the Hospital Fund, in duplicate, to the medical director, with one complete set of vouchers; and invoice of durable articles (if any) purchased with hospital fund. (See Circular Orders, No. 1, Surgeon-General's Office, February 8, 1875, and Circular Orders, No. 3, Surgeon-General's Office, August 15, 1868.)

(Medical Director retains one copy of the statement and forwards the other with the vouchers to the surgeon-general.)

3. Meteorological Report, direct to the surgeon-general. (See pages 330, 333, Revised Army Regulations, 1863; also Circular No. 2, Surgeon-General's Office, May 27, 1873.)

4. Report of Examination of Recruits from Medical Officers at Recruiting Stations or Depots, direct to the surgeon-general. (See Circular Orders, No. 2, Surgeon-General's Office, May 12, 1866.)

5. Special Report of the condition of wounded men examined by medical officers, engaged in the examination of recruits, direct to the surgeon-general. (See Circular Orders, No. 7, Surgeon-General's Office, December 28, 1866.)

6. Monthly Sanitary Report, to commanding officer of post. (See Circular Orders, No. 3, Surgeon-General's Office, November 25, 1874.)

7. Medical Officer's Personal Report of Station and Duty. One

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copy to surgeon-general, adjutant-general, and medical director. (See Circular Orders, No. 8, Surgeon-General's Office, November 18, 1873.)

8. Hospital Steward's Personal Reports of Station and Duty. One copy to surgeon-general, adjutant-general, and medical director. (See Circular Orders, No. 8, Surgeon-General's Office, November 18, 1873; also Circular No. 2, Surgeon-General's Office, September 30, 1870.)

9. Return of enlisted men serving as Hospital Stewards, 2d and 3d class, by post surgeon to medical director. (This return is forwarded by order of the medical director, pursuant to instructions from the surgeon-general, dated June 27, 1871.)

(When no stewards of the second or third class have been on duty during the month, the medical officer is required to report the fact to the medical director in place of sending the return.)

10. Report of Hospital Matrons on duty at the Post, to the medical director, in accordance with instructions from the surgeon-general, dated August 3, 1876.)

QUARTERLY REPORTS.

1. Report of Wounded, to the surgeon-general, through the medical director.

2. Report of Surgical Operations, to the surgeon-general, through the medical director.

3. List of Wounded remaining under treatment, to the surgeon-general, through the medical director.

(These three reports are forwarded in accordance with instructions of Circular Orders, No. 1, Surgeon-General's Office, May 22, 1876; Circular Orders, No. 3, Surgeon-General's Office, July 15, 1875; Circular Orders, No. 5, Surgeon-General's Office, July 24, 1873, and Circular Orders, No. 3, Surgeon-General's Office, June 20, 1866.)

(When no surgical operations have been performed during the quarter, or no cases of wounded occurred under Class 5, the facts will be reported to the surgeon-general, in separate communications, and forwarded through the medical director. Lists of wounded remaining under treatment are forwarded only when there are cases to be reported.)

ANNUAL REPORTS.

1. Property Return, in triplicate: original with one set of vouchers and duplicate to surgeon-general by different mails; trip-

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licate with one set of vouchers to be retained. This return will also be made whenever an officer ceases to be responsible for property by change of station or other cause. (See Circular Orders, No. 1, Surgeon-General's Office, January 23, 1868.)

2. Sanitary Report, in duplicate, through commanding officer. (See Circular Orders, No. 3, Surgeon-General's Office, November 25, 1874; Circular Orders, No. 7, Surgeon-General's Office, August 15, 1873; Circular Orders, No. 1, Surgeon-General's Office, February 5, 1870; Circular Orders, No. 4, Surgeon-General's Office, August 25, 1868.)

(Those reports are forwarded by the post commander to the headquarters of the department, and are then referred by the commanding general to the medical director. The medical director retains one copy for the files of his office, and returns the other with his remarks to the commanding general, who forwards it to the adjutant-general, by whom it is transmitted to the surgeon-general.)

3. Return of Durable Property purchased with the Hospital Fund, in quadruplicate: one copy to the medical director; two to the surgeon-general, with one set of vouchers, and one copy to be retained with vouchers. (See Circular Orders No. 3, Surgeon-General's Office, August 15, 1868, and Circular No. 7, S. G. O., October 2, 1876.)

4. Estimate of Repairs, Alterations, or Additions to Post Hospital; or, for the erection of new hospital buildings when deemed necessary; on May 1st (for the Department of Dakota, March 1st), to be forwarded to the adjutant-general, through the post commander. (See General Orders, No. 94, Adjutant-General's Office, November 16, 1875.)

(When no repairs, alterations, etc., are needed, a report to that effect is required to be forwarded by the medical officer to the adjutant-general through the regular channels. The estimate is forwarded by the post commander to the headquarters of the department, and after the views of medical director and chief quartermaster have been obtained, it is transmitted by the commanding general to the adjutant-general of the army for the action of the Secretary of War.)

OCCASIONAL REPORTS.

1. Report of Examination of Recruits from medical officers not at a recruiting station or depot: to the surgeon-general through the medical director. (See Circular Orders, No. 2, Surgeon-General's Office, May 12, 1866.)

(This report is forwarded by the medical officer whenever he examines a recruit.)

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2. List of Wounded in Action, in duplicate to the medical director. (See Circular Orders, No. 3, Surgeon-General's Office, July 15, 1875, and Circular Orders, No. 10, Surgeon-General's Office, October 22, 1867.

3. Classified Return of Wounds and Injuries, in duplicate, to the medical director. (See Circular Orders, No. 3, Surgeon-General's Office, July 15, 1875, and Circular Orders, No. 10, Surgeon-General's Office, October 22, 1867.)

(The medical director retains one set of these lists and classified returns, to accompany his report to his commanding general, and forwards the other to the surgeon-general.)

4. Special Report of Outbreak of Epidemic to medical director and surgeon-general. (See Circular, No. 3, Surgeon-General's Office, April 20, 1867, and Circular, No. 2, Surgeon-General's Office, June 12, 1868.)

5. Monthly Report of Patients suffering from Epidemic Disease, in duplicate: one copy to medical director and one to surgeon-general. (See Circular, No. 3, Surgeon-General's Office, April 20, 1867, and Circular, No. 2, Surgeon-General's Office, June 12, 1868.)

6. Special Report of Interesting Cases, to surgeon-general, through the medical director. (See Circular Orders, No. 3, Surgeon-General's Office, July 15, 1875.)

7. Inventory and Inspection Report of Unserviceable Property, through post commander, to adjutant-general of the department, when required, for the action of the commanding general. (See Instructions from A. G. O. on Forms, August 28, 1869.)

(This inventory is made out in triplicate in accordance with instructions on the blanks furnished by the inspector-general. After the property has been disposed of the medical officer responsible for it sends one of the inventories to the surgeon-general; one accompanies his next returns, and the third copy is retained. Articles of durable property purchased with the hospital fund must not be placed on inventory and inspection reports of medical and hospital property, but kept entirely distinct. When such articles have become worn out or unfit for use, a report is to be made by the medical officer, stating their exact condition, etc., and forwarded to the surgeon-general, through the medical director. (See Circular No. 1, Surgeon-General's Office, October 2, 1876.)

8. Medical Officer's Report of arrival at or departure from a station: to medical director and surgeon-general direct. It should state particularly the number, date, and source of the order directing the change; the date when the medical officer arrived at a station, and when he reported for duty; or the date when he was

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relieved from duty and the date of his departure. A similar report is required from hospital stewards of the first class to be forwarded through the medical officer of the post to medical director and surgeon-general. (See Circular Orders, No. 8, Surgeon-General's Office, November 18, 1873.)

9. Report of Discharge, or of Discharge and Reënlistment of Hospital Steward, to be forwarded by medical officer at post to the surgeon-general through the medical director. (See Circular, No. 2, Surgeon-General's Office, September 30, 1870.)

REQUISITIONS FOR MEDICAL AND HOSPITAL SUPPLIES.

Requisitions for Medical and Hospital Supplies are made semi-annually, except for some remote posts, where they are made for one year's supply, in accordance with instructions of the Standard Supply Table. (Circular, No. 1, Surgeon-General's Office, July 1, 1871.) The quantity on hand of each article called for should be accurately stated in the proper column, both in the regular and special requisition, and when articles are required which are not on the Supply Table, or in excess of the authorized allowance, the reasons therefor should be stated on the requisition itself.

GENERAL DIRECTIONS.

When a death or discharge is entered on the Monthly Report of Sick and Wounded, it must in every case be stated whether or not the cause originated in the line of duty.

The date of arrival of troops at a station, or their departure therefrom, with the letters of the companies and designation of the regiment, must also be noted on the Monthly Report of Sick and Wounded.

In Certificates of Disability for Discharge from Service, the medical certificate must in every instance be made out in the handwriting of the surgeon signing it.

Blanks are furnished from the office of the surgeon-general. Medical officers are required, by Circular Orders, No. 4, Surgeon-General's Office, July 10, 1869, to procure an annual supply by timely requisition. Blanks for use at temporary posts, or with detachments, or at posts where the annual supply is exhausted, may be obtained from the medical director.

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In describing wounds and injuries (Class V.), the exact seat and nature of the injury must be stated. For example: incised wound of *palm of left* hand; sprain of *right* wrist.

Medical officers, upon being relieved of the charge of a *temporary* hospital or detachment, will make the monthly and quarterly reports without waiting the expiration of the quarter. (See Circular Orders No. 3, Surgeon-General's Office, June 20, 1866.)

As a general rule it should be borne in mind that *all blank spaces in the printed forms are to be filled.*

Retained copies of all reports made should be kept on file at the post hospital.

RETURNS, ETC., REQUIRED FROM MEDICAL DIRECTORS.

1. Return of Medical Officers serving in the division or department.

2. Return of Hospital Stewards, U. S. army, serving in the division or department.

3. Return of Hospital Stewards of the second and third class serving in the division or department.

4. Return of Hospital Matrons serving in the division or department.

(These returns are made at the end of each month and forwarded to the surgeon-general as soon thereafter as practicable.)

5. Report of Posts and Stations in the division or department, forwarded to the surgeon-general on the 15th of each month.

6. Annual report of the operations of the department, made when called for by the commanding general.

7. Transcript of the Record of Deaths in the division or department during the year.

8. Transcript of the Record of Certificates of Disability for discharge from service, received at medical director's office during the year.

(These transcripts are forwarded to the surgeon-general as soon as completed after the end of each year.)

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SUPPLY TABLE OF MASSACHUSETTS.

Commonwealth of Massachusetts.

OFFICE OF SURGEON-GENERAL,
BOSTON, *June* 15, 1877.

CIRCULAR No. 1.

The following is the STANDARD SUPPLY TABLE of the MEDICAL DEPARTMENT of the MASSACHUSETTS VOLUNTEER MILITIA, and its provisions and requirements will be in force from this date.

STANDARD SUPPLY TABLE.

MEDICINES.

Articles.	Allowance.
Aconite root, fl. ext.	½ oz.
Alum, ferric	2 oz.
Ammonia, arom. spts. of	2 oz.
Benzoin, comp. tinct.	2 oz.
Camphor, spirits of	2 oz.
Catechu, fl. ext.	2 oz.
Castor oil	4 oz.
Cerate, simple	2 oz.
Chloral, hydrate	1 oz.
Chloroform	2 oz.
Collodion	1 oz.
Diarrhœa mixture	4 oz.
Dover's powder, in 5-gr. pills	100
Ether, sulphuric	1 lb.
Gentian, comp. tinct.	2 oz.
Iodine, tinct.	1 oz.
Ipecacuanha, fl. ext.	2 oz.
Iron, sol. of subsulphate	2 oz.
Iron, per-chloride, tinct.	2 oz.
Kino, fl. ext. of	2 oz.
Lavender, comp. spirits	2 oz.
Liniment	16 oz.
Magnesia, sulphate	16 oz.

Notes. — 1. The "Liniment" is prepared with equal parts of solution of ammonia, oil of turpentine, and olive oil.

2. The "Diarrhœa mixture" consists of equal parts of the tinctures of camphor, opium, and rhubarb. The dose is one teaspoonful.

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MEDICINES — *continued.*

Articles.	Allowance.
Mercurial ointment	½ oz.
Morphia, sulphate, ⅛-gr. pills	50
Nitre, sweet spirits	2 oz.
Opium, pills, 1 gr. each	25
Opium, fl. ext.	2 oz.
Pepper, Cayenne, fl. ext.	2 oz.
Pills, comp. cathartic	50
Potassa, chlorate	2 oz.
Potassium, bromide	2 oz.
Potassium, iodide	1 oz.
Rhubarb, fl. ext.	2 oz.
Rochelle powders	1 box.
Soda, bicarbonate	1 oz.
Zinc, oxide, ointment	2 oz.
Zinc, sulphate	1 oz.

STORES, SUPPLIES, ETC.

Articles.	Allowance.
Brandy	1 pint.
Bandages, assorted	2 doz.
Corks, assorted	½ doz.
Ligatures, silk	1 skein.
Lint	1 oz.
Muslin, unbleached, unsized, yd. wide	2 yds.
Pins	1 paper.
Plaster, adhesive	1 roll.
Plaster, isinglass	1 roll.
Towels	2
Whiskey	1 qt.

THE FIELD COMPANION.

Contains: —
- Six two-ounce tin bottles.
- One eight-ounce tin bottle.
- One sixteen-ounce tin bottle.
- Four pill boxes.
- Two ointment jars.
- One pair scissors.

Contains: —
- One graduate glass
- Two towels.
- One teaspoon.
- One sponge.
- One tourniquet.
- One thirty-minim pipette.

REQUIREMENTS.

1. Requisitions for medical supplies will be made annually, fourteen (14) days before the annual encampment. Special emergencies will be met, if necessary, by special requisition.

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2. Requisitions for medical supplies are to be made in duplicate, one to be forwarded and one to be retained. They will usually be made for such a number of articles as the "Field Companion" will contain, and must exhibit the quantity of each article on hand. In preparing the requisition, medical officers will conform to the "Standard Supply Table" as to articles; and if quantities in excess of the authorized allowance be asked for, satisfactory reasons therefor must be assigned, or they will not be issued.

3. The senior medical officer of every command will forward his requisitions for medical supplies to his medical director, who will approve or modify the requisition at his discretion and forward the same to the surgeon-general for his approval and issue. Medical officers of organizations not attached to a brigade, will forward their requisitions direct to the Surgeon-General.

4. A "Field Companion" will be issued to each organization, on requisition, from this office. If more medicines or stores are desired than the above will contain, a reasonable number of articles, properly packed, will be issued upon approval of the medical director. Organizations possessing medicine cases differing from the regulation "Field Companion," may have them filled in quantities not exceeding the regular allowance, upon requisition approved by the medical director.

5. At each encampment meteorological instruments will be issued to one of the medical officers, upon recommendation of the senior medical officer.

6. Medicine cases, etc., needing repairs, will be returned to this office, and a receipt given therefor.

7. When it is necessary to obtain medical supplies in emergencies which do not admit making a requisition in the usual manner, they may be purchased and paid for by the medical officer, and bills in duplicate for his reimbursement be forwarded through the medical director to the Surgeon-General. The purchasing officer shall prepare, in triplicate, an invoice of the articles bought, one copy with the bills to be forwarded to the surgeon-general; one as a voucher to accompany his next property return, on which he shall account for the articles purchased; and one to be kept with his retained set of vouchers. *Medical officers will exercise great care to avoid, by proper requisitions, the necessity for making direct purchases.*

8. In all issues of medical supplies triplicate invoices will be made, two of which will accompany the supplies, and one be retained in this office.

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9. All medical officers in charge of medical supplies or instruments will, annually on or before the first day of December, make a return of medical property, as to the quantity, condition, etc., direct to this office. This report will be made in duplicate, one copy to be accompanied with a full set of vouchers for this office, the other to be retained by the medical officer.

10. Articles lost, or destroyed by unavoidable accident, must be accounted for by a certificate from the medical officer setting forth fully the circumstances under which such loss or destruction occurred. Such certificates must be forwarded through the medical director for remark.

11. Each medical officer will supply himself with a surgical pocket case.

12. Field operating cases will be issued to the senior medical officer of an encampment upon requisition, and proper returns thereof made on his annual report. No capital operation shall be performed upon the field during an encampment, except such as, after due consultation of the medical officers present, shall be deemed necessary to save life.

13. In the absence of specific rules and regulations, medical officers will govern themselves by the rules and regulations of the medical department of the United States army.

14. The attention of all medical officers is called to section 52, Laws for the Government of the Massachusetts Militia, which is as follows: "The Surgeon-General, under the direction and supervision of the Commander-in-Chief, shall purchase and issue all medical, surgical, and hospital supplies, and perform all such other duties appertaining to his office as the Commander-in-Chief shall from time to time direct."

"Surgeons of brigades, regiments, battalions, or other organizations shall, after each tour of duty, and within ten days thereof, report to the surgeon-general, through proper channels, of all that pertains to their office which relates to such duty."

(Signed) WM. J. DALE,
Surgeon-General.

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INDEX.

Absence on sick leave 44
Adjutant to be provided with muster-roll of field and staff . 31
Air and ventilation, necessity of 69
Application for appointment in medical corps must be in hand-writing of candidate 82
must state age and birthplace 82
must be accompanied by testimonials from professors of the college in which he graduated 82
Appointment of medical officers 12, 74
Army medical board, assistant surgeons to be examined and approved by 82
how constituted 82
Artillery, directions for battalion formation 33
position of staff officers 33
ceremonies, etc. 33
Assistant surgeon in U. S. army must be examined and approved by army medical board 82

Band, position of, when on march 32
Blanks, whence obtained 89
Board of examination in the regular service 40
its duties 40
in Massachusetts 40, 41
in Kansas 41
Board of inspection, how constituted 40
its duties 40
Board of survey 39
its functions 39
when surgeons will be members of 40
Brigade dress parade, position of staff and non-commissioned staff 29

Digitized by Google

Candidates for appointment in medical corps must apply to Secretary of War 82
must be between twenty-one and twenty-eight years of age 83
must be graduates of a medical college 83
must have a thorough and complete course of medical education 83
general plan of examination of, by army medical board 83
failing one examination, may be allowed a second . 84
Cause of death or discharge must be entered on monthly report 89
Cavalry, position of staff in line 33
open order 34
column 34
position of non-commissioned officers 34
inspection of 34
when formed with more than one battalion . . . 34
Ceremonies 28
medical officer should acquaint himself with . . . 28
Certificates, surgeon should keep copies of all signed by him 43
of disability, must be in handwriting of surgeon . . 89
Clothing, suggestions in regard to 72
Commanding officer has general supervision of medical department 11
will aid in carrying out suggestions of surgeon . . 11
will see that surgeon does not neglect his duty to the sick 11
exercises his judgment as to necessity and expediency of surgeon's requisitions 11
Company sick book, surgeon's duties defined in regard to . 46
to be signed by the surgeon 46
Consolidated morning sick report, how made 50
Correspondence, official, between heads of departments, whom to pass through 36
Courtesy among military men indispensable to discipline . . 21
Court-martial 39
surgeons may be detailed as members of . . . 39

Discharge, certificate of disability for 43, 44
original, to be forwarded to the adjutant . . . 43
modified form of, adopted in Massachusetts . . 43

Digitized by Google

Discharge, form of, prescribed for army, will not answer for militia when not in active service 43
of soldier cannot properly be effected for disability, except upon a surgeon's certificate 43
of soldiers 43
Dress parade 28
medical officers seldom required to be present at . 29
position of staff and non-commissioned staff . . 28, 29
position of staff of general officer 35

Epaulette 16
Examination of candidates for appointment . . . 40, 41
of recruits 41
of candidates for appointment in medical corps . . 82–84

Fines for non-attendance at drills, etc., in some states, avoided by certificate of sickness 44
Form of folded letter 37
of address of an officer 38, 39
of certificate of disability for discharge . . . 43
of certificate of disability for absence 45
of company sick book 47
of morning sick report 49
of register and prescription book 52
of requisition for medical and hospital supplies . . 62
of bill for reimbursement for moneys expended by medical officer 63
of invoice of medical supplies purchased by medical officer 64
of invoice of medicines, etc. 65
of receipt for medicines, etc. 66
of meteorological record 53
of return of medical and hospital property . . . 67

General duties of medical officer 11

Horsemanship, directions regarding 22–24
Hospital steward, duties of 73
enlisted by commanding officer 73
may be required to pass an examination . . . 73
rank of 14

Digitized by Google

Inclosures, directions in regard to 37, 38
Indorsements by officers forwarding communications . 36, 37
Infantry 25
staff officers in, are supposed to be mounted during all manœuvres 25
position of surgeon, hospital steward, etc. 25
Inspecting and mustering officer usually the same person . 31
Inspection 30–31
of cavalry, position of staff-officers 34
Invoices of medical supplies to be prepared in triplicate . . 64

Letters and orders kept on file to be indorsed 37

Manual of the sword 18–20
Manuals about examination of recruits 42
Medical corps, candidates for appointment in must apply to Secretary of War 82
Medical department of U. S. army, how constituted . . 82
Medical director may summon members of medical staff belonging to his brigade 14
Medical officers, mode of determining their qualifications in Massachusetts, Connecticut, New York, and Kansas . . 41
of cavalry, position of 33, 34
cannot exercise command except in own department . 14
may command all enlisted men 14
modes of appointment of 12, 13
rank of 13, 14
style of address of 14
style of signature of 14, 15
considered as regimental officer 15
on duty with working party has advisory control . . 12
orders of, should be given in the name of his commanding officer 12
his duty to prevent straggling under pretext of aiding sick and wounded 30
uniform of 15, 76–81
when full uniform and side arms should be worn by . 16
in army, is medical corps or staff, not *regimental* officer 15
in militia of most states, is regimental officer . . 15
position of, when on march 32
to ride occasionally to head of column 32

Digitized by Google

Medical officers to admit sick men to ambulance . . . 33
to indorse pass of men permitted to fall out on account of sickness 33
position on staff of general officer 35
to keep certain records 50
may purchase medical supplies in an emergency . . 62
to exercise great care to avoid necessity of making direct purchases 63
to certify concerning loss or destruction of medical property 67
charged with the entire sanitary care of his corps . 68
should look after all matters pertaining to health and cleanliness of soldiers and camp 68
should make suggestions to the commanding officer . 68
not responsible for the cleanliness of the camp . . 68
should be consulted in selecting the site for a camp . 68
on being relieved of charge of *temporary* hospital or detachment, will make reports 90
Medical property, return of, to be made annually . . . 66
lost or destroyed, how accounted for 67
when can be returned as worn out or unfit for use . 67
Medical purveyor to militia 62
Medical supplies turned over to quartermaster 64
Meteorological observations, directions for taking . . . 53
Meteorological register 53
Military boards 39
medical officer may be detailed on 39
Morning sick report, when made out 48
who to be entered upon 48
to whom sent 48
by whom signed 48
Morning sick report book, surgeons furnished with . . . 61
Muster or roll-call follows inspection 31
field and staff officers not required to answer personally to their names at 31
presence of men in hospital verified by mustering officer 31
Mustering officer, in Massachusetts, a staff officer appointed for the special duty of mustering 31
to verify the presence of men reported in the hospital 31

Nomenclature, order, and classification of official lists of medical supplies 61, 62

Digitized by Google

Non-commissioned staff, posts of 25
diagram showing their position in line 26
diagram showing their position in column . . . 27
position on dress parade 28

Officer of the day responsible for the cleanliness of the camp . 68
Officers to acknowledge courtesies of enlisted men . . 21
Official letters, how to be written 36
directions for folding 36
Order and letter book to retain copies of all letters and reports received and sent 60

Position of a soldier 17

Quarters allowed medical officers 16
position of 16
subject to orders of commanding officer . . . 17

Rain gauge, diagram of 55
Rank of medical officers 13, 74–76
of hospital steward 14
rights and privileges carried with 14
of medical officers on a general's staff 75
of regimental medical officers 76
Rations not issued to militia unless called into active service . 70
when necessary to provide, for militia . . . 70
Receipts for medical supplies to be prepared in triplicate . . 64
Records to be kept by medical officer 50
Recruits, examination of 41
regulation for the examination of 42
Regimental staff, their position in line 25
Register and prescription book 51
Report, annual, required in Massachusetts from certain medical officers 50
Reports and returns required from medical officers of the U. S. army 85
Requisitions, reports, and returns, copies of, to be kept on file 60
for articles from quartermaster's department, how forwarded 61
to be made out in duplicate for medical supplies . 61
Requisitions for medical and hospital supplies 89

Digitized by Google

Respect to superiors not confined to obedience on duty . 21
Retiring board, how constituted 40
Return of medical property to be made annually . . . 66
to be made in triplicate 68
form of 67
Returns, etc., required from medical directors 90
Review, directions regarding 29
of artillery, position of staff and non-commissioned officers 33
position of staff of general officer 35
Rolls and returns to be accompanied by letter of transmittal 36

Salutes 17, 18, 20, 21, 28, 29, 30, 33
Sanitary duties and suggestions 68
"School of the Soldier," medical officer should study and practice the 17
Sick report, form of 49
Sinks, description of, at state camp ground in Massachusetts . 71
Staff and non-commissioned officers of artillery, position of . 33
Staff officers, posts of 25
diagram showing their position in line 26
diagram showing their position in column . . . 27
position on dress parade 28
Staff and non-commissioned staff, diagram showing their position after the order to "Rear Open Order" has been executed 28
Staff and non-commissioned staff, diagram showing position of, after the order "Companies Right Wheel" has been executed 29
Staff and non-commissioned staff, diagram showing their position after the order "Field and Staff to the Front" has been executed 31
Staff, position of, when on the march 32
Staff officers not required to answer personally to their names at muster or roll-call 31
officers of cavalry, position of 33, 34
Standard supply table, nomenclature, order, and classification, to be followed 62
Street parades, position of medical staff in 30
duties of medical officer 30
Subsistence, when necessary to provide for militia . . . 70

Digitized by Google

Supplies to be made according to the standard supply table . 61
Supply table of Massachusetts 91
Surgeon, medical department intrusted to 11
submits his plans and requisitions to his commanding officer 11
management of the sick left entirely with . . . 11
makes the necessary regulations for the government of the sick in the hospital 12
decides who are sick 11
decides who for that cause shall be excused from duty . 11
decides who shall enter hospital 11
to make annually a return of medical property . . 66
in U. S. army must have served five years as assistant surgeon 82
Surgeons in Massachusetts, to report to surgeon-general . . 50
"Surgeon's mate," title of, retained in laws of certain States 76
Surgeon's or sick call 45
when sounded 45
Surgeons, when under arrest, may be required to perform the duties of their office 39

Tactics 17
Tables of relative humidity 57, 58
Tents, position of, in militia camps 16

Uniform, of militia medical officers 15
when should be worn 16
of medical officer in U. S. army 77–81

Vermin, how exterminated 71

Water, directions for purifying 70

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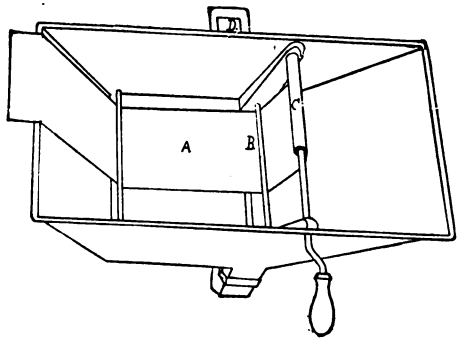

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